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OHIO A. PHILIP RANDOLPH)	
INSTITUTE, <i>et al.</i>)	
)	
Plaintiffs,)	No. 1:18-cv-00357-TSB-KNM-MHW
)	
v.)	Judge Timothy S. Black
)	Judge Karen Nelson Moore
)	Judge Michael H. Watson
LARRY HOUSEHOLDER, Speaker of the)	Magistrate Judge Karen L. Litkovitz
Ohio House of Representatives, <i>et al.</i>)	
)	
Defendants.)	
)	

PLAINTIFFS' PROPOSED FINDINGS OF FACT

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I. The Parties and Their Claims

1. Plaintiffs Linda Goldenhar, Douglas Burks, Sarah Inskeep, Cynthia Libster, Kathryn Deitsch, Luann Boothe, Mark John Griffiths, Lawrence Nadler, Chitra Walker, Tristan Rader, Ria Megnin, Andrew Harris, Aaron Dagres, Elizabeth Myer, Beth Hutton, Teresa Thobaben, and Constance Rubin are individual Democrats and voters in Ohio, who live in each of Ohio's 16 congressional districts.

2. Plaintiff Ohio A. Philip Randolph Institute ("APRI") is an Ohio nonpartisan, nonprofit organization founded in 1965. APRI is pursuing its claims on behalf of itself and on behalf of its Democratic members.

3. Plaintiff League of Women Voters of Ohio ("LWVO" or the "League") is an Ohio nonpartisan, nonprofit organization founded in 1919. LWVO is pursuing its claims on behalf of itself and on behalf of its Democratic members.

4. Plaintiff The Ohio State University College Democrats ("OSU College Democrats") is an organization of Democratic students enrolled at The Ohio State University, primarily residing in Ohio's Third, Twelfth, and Fifteenth Congressional Districts. OSU College Democrats is pursuing its claims on behalf of itself and on behalf of its Democratic members.

5. Plaintiff Northeast Ohio Young Black Democrats ("NEOYBD") is an organization of Democratic young people who live in Ohio's Ninth, Eleventh, Thirteenth, Fourteenth, and Sixteenth Congressional Districts. NEOYBD is pursuing its claims on behalf of itself and on behalf of its Democratic members.

6. Plaintiff Hamilton County Young Democrats ("HCYD") is an organization of Democratic young people who reside in Hamilton County in Ohio's First and Second Congressional Districts. HCYD is pursuing its claims on behalf of itself and on behalf of its Democratic members.

7. Plaintiffs filed this action on May 23, 2018. (ECF No 1). Plaintiffs contend that Ohio's congressional districts constitute a partisan gerrymander that violates their First Amendment rights to associate with and advocate for a political party, to vote for their candidate of choice, to express their political views, and to participate in the political process; their right to vote under the Fourteenth Amendment; their right to Equal Protection under the Fourteenth Amendment; and that exceeds the state's power under Article I of the Constitution.

8. Plaintiffs seek declaratory and injunctive relief under 42 U.S.C. § 1983 against Defendants: the Secretary of State, currently Frank LaRose, President of the Ohio Senate, currently Larry Obhof, and Speaker of the Ohio House of Representatives, currently Larry Householder, in their official capacities.

9. In addition to the Defendants, the following Republican Congressmen have intervened in this case: Representative Steve Chabot, Representative Brad Wenstrup, Representative Jim Jordan, Representative Bob Latta, Representative Bill Johnson, Representative Bob Gibbs, Representative Warren Davidson, Representative Michael Turner, Representative Dave Joyce, and Representative Steve Stivers. Intervenors were represented by counsel at trial.

II. The Republicans' Predominant Intent Was to Entrench a Partisan Advantage Through Congressional Redistricting in 2011.

A. National Republicans sought full Republican control of Ohio's 2011 redistricting process.

1. *Ohio was central to national Republicans' plan to maximize their influence over congressional redistricting.*

10. The Ohio General Assembly (the "General Assembly") is responsible for enacting legislation that defines the boundaries for Ohio's congressional districts. To become law, a congressional district plan must be approved by a majority of both the Ohio House of

Representatives and the Ohio State Senate, and then signed into law by the Governor of Ohio. Joint Uncontroverted Facts, ECF No. 212-1, ¶ 1. The Joint Legislative Task Force on Redistricting, Reapportionment, and Demographic Research (“Task Force”) is tasked with providing assistance to the General Assembly in its redistricting work. *See id.* ¶ 2. The Task Force is a six-person bipartisan committee, with three members appointed by the Speaker of the Ohio House of Representatives and three by the President of the Ohio State Senate. *Id.*

11. The Republican State Leadership Committee (“RSLC”) is a national Republican political organization dedicated to electing Republicans in “down-ballot” state offices, including state legislatures. Jankowski Dep., ECF No. 230-23 at 54:8-13.

12. During the 2010 election, the RSLC sought to “keep or win Republican control of state legislatures with the largest impact on congressional redistricting as a result of reapportionment,” by “focus[ing] critical resources on legislative chambers in states projected to gain or lose congressional seats in 2011 based on Census data.” Trial Ex. P293, RSLC Jan. 3, 2013 REDMAP Memo at 2; *see also* Jankowski Dep., ECF No. 230-23 at 97:2-10, 109:5-10.

13. The RSLC stated that using the redistricting process to draw reliably Republican congressional districts would relieve Republicans of the burden of competing with Democrats in contested elections. Trial Ex. P285, REDMAP Presentation at RSLC00000381; *see also* Jankowski Dep., ECF No. 230-23 at 109:25-111:5, 114:4-11.

14. The RSLC told donors that investing in state races in 2010 was a cheaper alternative to spending money on competitive congressional elections over five election cycles. According to the RSLC, a relatively modest investment of \$31.5 million in state legislative races could result in the creation of 20 to 25 new Republican congressional seats through redistricting. The RSLC represented that winning the same 20 to 25 congressional districts if they were

competitive, swing, or Democratic-leaning congressional districts would cost an estimated \$255 million over 10 years. Trial Ex. P285, REDMAP Presentation at RSLC00000381; *see also* Jankowski Dep., ECF No. 230-23 at 110:25-111:5 (confirming that the “sales pitch [was] basically that the [redistricting] process was a cheaper alternative to spending money on competitive congressional elections over the next five cycles”).

15. With the 2010 redistricting cycle approaching, the RSLC began raising money for an initiative known as the REDistricting Majority Project (“REDMAP”) in mid-2010. Jankowski Dep., ECF No. 230-23 at 36:23-37:14; *see also* Trial Ex. P293, REDMAP Presentation at RSLC000002582.

16. The Ohio House of Representatives was a key target of national Republicans, since they only needed to “flip” four seats to have a majority in that body and Ohio’s Senate was already controlled by Republicans. *See* Jankowski Dep., ECF No. 230-23 at 84:19-85:11; Trial Ex. P281, June 2010 REDMAP Political Report at RSLC00002811.

17. To help Republicans win control of the Ohio House, the RSLC spent approximately \$1 million in support of Republican candidates. Jankowski Dep., ECF No. 230-23 at 156:21-157:7; *see also* Trial Ex. P293, RSLC Jan. 3, 2013 REDMAP Memo at 2. After initially targeting 12 seats, the RSLC ultimately focused its spending on six seats—five of which were ultimately won by Republicans. *See* Jankowski Dep., ECF No. 230-23 at 157:8-13; *see also* Trial Ex. P293, RSLC Jan. 3, 2013 REDMAP Memo at 2.

18. In January 2013, two months after the 2012 election, the RSLC boasted that their \$1 million investment in Ohio House races in 2010 built a Republican firewall through redistricting that “allowed a 12-4 Republican majority to return to the U.S. House of Representatives [in 2012]—despite voters casting only 52 percent of their vote for Republican

congressional candidates.” Trial Ex. P293, RSLC Jan. 3, 2013 REDMAP Memo at 4; *see also* Jankowski Dep., ECF No. 230-23 at 152:11-153:14 (stating that document was circulated to media and posted on the RSLC’s website).

2. *In 2010, with the help of their national counterparts, Ohio Republicans secured total control over the 2011 redistricting process.*

19. Following the 2010 elections, Republicans won control of a majority of seats in the Ohio House of Representatives, a supermajority of seats in the Ohio Senate, and the Ohio governorship. Trial Ex. P293, RSLC Jan. 3, 2013 REDMAP Memo at 4; Turner, ECF No. 240 at 7:23-8:3; Trial Ex. J16 (election results for 2010 statewide elections).

20. As a result, Republicans effectively controlled the redrawing of Ohio’s 16 congressional districts the following year. Trial Ex. P293, RSLC Jan. 3, 2013 REDMAP Memo at 4. As the newly elected Republican Speaker of the Ohio House, William George Batchelder remarked that winning majorities in the General Assembly meant that Republicans could simply do what they wanted to do with respect to congressional redistricting. Batchelder Dep., ECF No. 230-3 at 25:7-17; Trial Ex. P293, RSLC Jan. 3, 2013 REDMAP Memo at 4.

21. Similarly, Senate President Larry Obhof acknowledged in an April 2018 panel discussion at the City Club of Cleveland that Democrats lacked negotiating power during the redistricting process. He explained, “there’s always the opportunity [to say], ‘hey work with us and we’ll do a slightly better map, or we’ll do what we want, we’ll pass it with 51 votes.’” Trial Ex. P425, City Club of Cleveland 2018 Panel Discussion Video; Obhof Dep., ECF No. 230-39 at 48:6-49:7; *see also* Trial Ex. P616, Obhof Responses to Second Set of Requests for Admission at 3 (admitting that the video “is a true and correct video recording of a panel discussion that [Senator Obhof] participated in at the City Club of Cleveland, 850 Euclid Avenue, Cleveland, Ohio 44114, on April 26, 2018”).

B. Ohio and national Republicans mounted a collaborative effort to achieve their partisan gerrymandering goals.

1. *Ohio and national Republicans began their collaboration regarding congressional redistricting before and immediately after the November 2010 midterm elections.*

22. In May 2010 and January 2011, state Republican leaders directed key staffers to attend redistricting conferences hosted by the Republican National Committee (“RNC”) and the National Conference of State Legislatures (“NCSL”), respectively, in Washington, D.C. Lenzo Dep., ECF No. 230-29 at 73:6-19, 83:9-84:2.

23. Michael Lenzo, who then served as the Chief Legal Counsel for the Ohio House Republican Caucus, attended the NCSL conference at the direction of Batchelder, then the Republican Minority Leader in the Ohio House of Representatives. Lenzo Dep., ECF No. 230-29 at 83:9-84:2; Defs.’ Answer, ECF No. 68, ¶ 49. Also in attendance were Matt Schuler, the Chief of Staff to Ohio Senate President Tom Niehaus, and Ray DiRossi and Heather Mann, Ohio Republican operatives who later became the key mapmakers for the Ohio Republican caucus. Lenzo Dep., ECF No. 230-29 at 83:21-84:2, 88:2-7.

24. At the conferences, the Ohio Republicans connected with key national Republican redistricting experts who later collaborated with them to draw proposed maps during the 2011 redistricting process. These experts included Mark Braden, the former General Counsel for the RNC; Thomas Hofeller, a redistricting specialist at the RNC; and John Morgan, a Republican map-drawing expert. Lenzo Dep., ECF No. 230-29 at 73:3-19, 85:2-88:7, 88:21-25; *see also* Bensen Dep., ECF No. 230-4 at 28:2-8; Braden Dep., ECF No. 230-7 at 21:17-22:9; Trial Ex. P362, Morgan Proposal for Services dated May 4, 2017.

25. Ohio Republicans also received early guidance on protecting the map drawing process from outside scrutiny. For instance, during the May 2010 RNC conference, Lenzo

attended a training session at which Morgan delivered a presentation on redistricting entitled, “Drawing the Lines.” Lenzo Dep., ECF No. 230-29 at 99:2-12, 101:14-22. The first substantive slide of Morgan’s presentation advised map drawers to “keep it secret, keep it safe.” Trial Ex. P346, Morgan 2010 Presentation at LENZO_0002550; *see also* Morgan Dep., ECF No. 230-34 at 131:17-133:6.

26. To that end, the presentation described measures map drawers should take to guard the map-drawing process from public scrutiny and legal review. Trial Ex. P346, Morgan 2010 Presentation. In particular, the presentation recommended “[c]ontrolled access to [the map-drawing] location (a door with a key)” and encouraged “[m]achine security, plan security, [and] personnel security.” *Id.* at LENZO_0002550; *see also* Morgan Dep., ECF No. 230-34 at 133:9-134:4. The presentation further instructed map drawers to “score the plans” and determine “the likely partisan outcome” and advised map drawers to involve counsel in the map-drawing process. Trial Ex. P346, Morgan 2010 Presentation at LENZO_0002575, LENZO_0002552; *see also* Morgan Dep., ECF No. 230-34 at 135:11-24, 137:13-138:9.

27. This message was subsequently reinforced in 2011, when Morgan traveled to Ohio to give the same presentation to a small group of Republicans in Ohio, including Lenzo and the three key mapmakers for the Ohio Republican caucus: DiRossi; Heather Mann,¹ an associate legal counsel in then-Minority Leader Batchelder’s office; and Troy Judy, Batchelder’s Chief of Staff. Lenzo Dep., ECF No. 230-29 at 99:6-100:5; *see also* Blessing Dep., ECF No. 230-5 at 27:6-28:5 (describing position), 48:11-19 (confirming that Mann and DiRossi were the two principal people working on drawing maps).

¹ Ms. Mann has since changed her name to Heather Blessing. She is referred to by her maiden name throughout, as that is the way she is referenced in the contemporaneous documents. The citation to her deposition is Blessing Dep., ECF No. 230-5, since that was her legal name at the time of the deposition and the manner in which the transcript is titled on this Court’s docket.

28. Lenzo also attended a presentation at the May 2010 RNC conference led by Hofeller entitled, “What I’ve Learned about Redistricting — the Hard Way!” Trial Ex. P351, Hofeller 2010 Presentation; Lenzo Dep., ECF No. 230-29 at 140:7-19, 145:4-6. The presentation admonished state legislative staff to “NEVER travel without counsel,” and emphasized that “Loose Lips, Sink Ships.” Trial Ex. P351, Hofeller 2010 Presentation at LENZO_0004558.

29. Upon his returning to Ohio, Lenzo distributed material from the RNC conference to Republicans legislative staffers, “[s]o that they could have this knowledge during the [redistricting] process.” Lenzo Dep., ECF No. 230-29 at 113:12-114:17.

30. In September 2010, Hofeller traveled to Ohio to meet with members of the Republican leadership team (then in the minority), including Batchelder; Representative Lou Blessing, who later became Speaker Pro Tempore; and Representative Matthew Huffman, who later sponsored the two congressional redistricting bills in the Ohio House of Representatives. Lenzo Dep., ECF No. 230-29 at 73:20-74:17; *see also* Batchelder Dep., ECF No. 230-3 at 30:9-14; Trial Ex. P391, Lenzo Email to Hofeller and Oldham dated Sept. 21, 2010; Lenzo Dep., ECF No. 230-29 at 81:4-17. During his visit, Hofeller provided instructions to Ohio Republicans on how to conduct the redistricting process. Accordingly, Hofeller encouraged the Republican leadership team to decide which staff to task with redistricting and to budget for a lengthy redistricting process that may include litigation over the enacted map. Lenzo Dep., ECF No. 230-29 at 74:14-75:5.

31. On September 22, 2010, Hofeller, along with RNC Redistricting Counsel Dale Oldham and RNC Regional Political Director Chris McNulty, also gave a presentation to key Republican staffers entitled, “Redistricting 2010 Preparing for Success.” Trial Ex. P390, RNC September 2010 Presentation; *see also* Lenzo Dep., ECF No. 230-29 at 73:20-75:5. Judy, Lenzo,

and Schuler attended the presentation, which stated that “if we win back the Governor’s Office and the State House, we will be in full control of congressional redistricting.” Trial Ex. P390, RNC September 2010 Presentation at 5; Trial Ex. P391, Lenzo Email to Hofeller and Oldham dated Sept. 21, 2010.

32. In follow-up communications with Lenzo dated September 29, 2010, Hofeller instructed Ohio Republicans not to rely on data from only two general elections—2008 and 2010—because Ohio Republicans may not “have enough statewide elections to determine what the line shifts mean.” Trial Ex. P396, Hofeller Email to Lenzo dated Sept. 29, 2010. Hofeller expressed particular concern about Ohio Republicans relying on 2008 election data, because 2008 “was certainly a low-water election” for Republicans. *Id.*

2. *After Republicans won full control of the General Assembly, national Republicans assembled their gerrymandering team, including RNC redistricting expert Thomas Hofeller.*

33. Following the 2010 elections, the RSLC encouraged state legislators to take advantage of a redistricting team—led by Hofeller—that had been retained by the RNC and an RSLC affiliate called the State Government Leadership Foundation (“SGLF”). Jankowski Dep., ECF No. 230-23 at 49:19-23, 126:12-127:4, 127:20-24; Trial Ex. P288 (letter from Chris Jankowski, President and Chief Executive Officer of RSLC, to legislative leaders offering assistance of Hofeller and his redistricting team “in drawing proposed maps, interpreting data, or providing advice”); Trial Ex. P291 (letter from Jankowski, Executive Director of SGLF, terminating “agreement dated April 18, 2011” between SGLF and Hofeller’s team); *see also* Trial Ex. P347 (letter from Hofeller to state leaders involved in redistricting enclosing materials for use in redistricting process).

34. The RSLC told state legislative leaders that Hofeller’s services would be offered to them free of charge. Jankowski Dep., ECF No. 230-23 at 133:13-134:6; *see also* Trial Ex.

P288 (letter from Jankowski to legislative leaders stating that “[t]he entirety of [Hofeller’s] efforts will be paid for using non-federal dollars through [the RSLC’s] 501c4 organization, the State Government Leadership Foundation (SGLF”).

35. On November 3, 2010—the day after the 2010 election—Lenzo called Hofeller to discuss the Republicans’ success. Lenzo Dep., ECF No. 230-29 at 77:24-75:13.

36. In May 2011, Mark Braden—whom the Ohio map drawers met at the 2010 RNC redistricting conference—flew to Ohio to have in-person meetings with Ohio Republicans. Among others, he met with Senate President Niehaus, Secretary of State Jon Husted, and Judy Schuler Dep., ECF No. 230-43 at 62:14-63:17; *see infra* Section II.B.3.

37. In June 2011, the Republican-led General Assembly retained Braden and his law firm, BakerHostetler, to provide legal services during the redistricting process. Trial Ex. P386, assignment letter to BakerHostetler from Ohio Attorney General; Braden Dep., ECF No. 230-7 at 16:21-18:4. Though Braden ostensibly represented the General Assembly, including both the Republican and Democratic caucuses, Braden has no specific recollection of speaking to Democratic minority leadership or their staff regarding redistricting in 2011. Braden Dep., ECF No. 230-7 at 17:18-19:2.

38. Braden subsequently returned to Ohio several times during the summer of 2011 to meet with Ohio Republicans and guide their map drawers through the redistricting process. Trial Ex. P065 (discussion points for Braden May 12, 2011 meeting); Trial Ex. P066 (agenda for Braden June 2, 2011 visit); Trial Ex. P067 at LWVOH_00008708 (script and agenda for June 2, 2011 meeting); Braden Dep., ECF No. 230-7 at 42:25-43:10.

39. As counsel to the General Assembly, Braden retained John Morgan to collaborate with Ohio Republicans on the drawing of a new congressional map. Morgan Dep., ECF No.

230-34 at 47:3-8, 49:22-24, 90:6-12; Trial Exs. P364-P366 (July-Sept. 2011, Applied Research Coordinates invoices billed to BakerHostetler).

40. On several occasions in the summer of 2011, Morgan trained Ohio Republican map drawers on the mechanics of generating congressional maps, including how to view political data using Maptitude, the redistricting software used to draw and edit maps. Morgan Dep., ECF No. 230-34 at 47:18-48:7, 48:13-49:14, 68:21-24, 69:4-7, 118:5-9; Blessing Dep., ECF No. 230-5 at 58:7-12.

41. Morgan met with Republican map drawers and other legislative staff involved in redistricting on July 7 and 8, 2011. Trial Ex. P106 (Redistricting Meetings Agenda for July 7-8, 2011); Morgan Dep., ECF No. 230-34 at 49:25-50:13, 58:16-60:18, 72:5-9; Schuler Dep., ECF No. 230-43 at 80:10-81:4. He made another trip to Ohio on July 25 and 26, 2011 to further collaborate with Ohio map drawers, including providing additional technical support. Morgan Dep., ECF No. 230-34 at 50:20-51:6, 74:25-75:20. During that visit, he also collaborated with Ohio Republicans on the drawing of congressional districts. *Id.* at 45:24-46:5, 76:7-13, 77:10-18, 79:12-20.

3. *National Republicans provided the map drawers with partisan political data for use in drawing and evaluating congressional district maps.*

42. Braden also retained a Republican consultant and former RNC data specialist named Clark Bensen to collaborate with Ohio Republicans. Bensen Dep., ECF No. 230-4 at 24:9-10, 25:2-9, 28:23-25, 67:6-16; Trial Ex. P006 (Oct. 4, 2011, Polidata invoice billed to BakerHostetler); Trial Ex. P007 (Feb. 16, 2012, Polidata invoice billed to BakerHostetler); *see also* Bensen Dep., ECF No. 230-4 at 27:4-11 (Bensen's company is named Polidata).

43. Bensen provided Ohio Republicans with election results and other partisan data for scoring proposed congressional districts. The election results could be loaded directly into

Maptitude, which the map drawers then used to generate and assess proposed maps. Bensen Dep., ECF No. 230-4 at 19:14-20:4, 33:15-34:24, 37:4-17, 38:6-12, 40:2-5, 48:11-15, 127:18-24; Morgan Dep., ECF No. 230-34 at 39:18-40:8.

44. The underlying dataset provided by Bensen was generated by an outside group working on behalf of the RNC. Bensen Dep., ECF No. 230-4 at 55:21-56:25, 57:4-58:23, 64:16-66:14, 66:17-67:5. This RNC-led group—referred to as the “Project”—oversaw the conversion of precinct-level election results estimated down to the smaller census-block level and prepared political data for use during the 2011 redistricting process in a number of states. *Id.* at 55:24-56:3, 56:6-7, 60:4-13, 64:22-24, 65:24-66:2.

45. Tom Hofeller was the main contact between the RNC and those working on the “Project.” *Id.* at 56:15-21, 61:9-17.

46. After receiving the census-block-level data for Ohio from the “Project,” Bensen validated the data and loaded it into Maptitude for use by the Ohio map drawers. *Id.* at 57:4-58:23, 60:4-18, 64:22-24; *see also* DiRossi Dep., ECF No. 230-12 at 226:4-6.

47. By providing Ohio Republican map drawers with this block-level political data, Trial Ex. P018 at BLESSING0013211, Bensen Dep., ECF No. 230-4 at 120:25-121:23, 122:12-24, 129:6-130:3, Bensen allowed the map drawers to build congressional districts using partisan political data at the most granular geographic level. DiRossi Dep., ECF No. 230-12 at 191:4-9 (census blocks were the “lowest common denominator”); Blessing Dep., ECF No. 230-5 at 45:16-21 (“The census block layer was one level that you could – that you could drill down to.”); Morgan Dep., ECF No. 230-34 at 33:25-34:5 (map drawers could draw districts around census blocks).

48. In connection with his prior work for the RNC, Bensen created “race code” labels corresponding to specific elections contained in his political data. Bensen Dep., ECF No. 230-4 at 52:13-53:9, 136:9-22. Bensen included these race codes in the political data he provided to the Ohio Republican map drawers in 2011. *Id.* at 136:9-22.

49. The race codes were composed of four components: (1) a “G”, indicating that the political data was drawn from a general—as opposed to a primary—election; (2) a two-digit shorthand for the year in which the given election was held (*e.g.*, “02” for elections held in the year 2002); (3) a letter indicating the office for which the election was held, as set out in the “Race Codes” table below; and (4) a shorthand indicating which partisan vote total or vote share is reflected.

Race Codes

Code	Election
P	President
S	Senate
G	Governor
A	Attorney General
I	Auditor
T	Secretary of State
J	Treasurer
H	House
Y	State Senate
X	State House

Vote Total/Share Codes

Code	Election
RV	Republican Votes Cast
DV	Democratic Votes Cast
TV	Total Votes Cast
RP	Republican Vote Share (<i>i.e.</i> , Republican Vote Cast/Total Votes Cast)

Bensen Dep., ECF No. 230-4 at 125:13-127:8, 127:14-21; Morgan Dep., ECF No. 230-34 at 115:23-117:2, 119:18-121:7, 122:17-124:15.

50. The political data Bensen provided to the Ohio Republican map drawers included data for each of the offices identified in the table above held between 2002 and 2010. Morgan Dep., ECF No. 230-34 at 44:9-17; *see also* Trial Ex. P014, Bensen Dep., ECF No. 230-4 at 99:12-100:13; Trial Ex. P019, Bensen Dep., ECF No. 230-4 at 135:11-23; Trial Exs. P046-P061²; Trial Ex. P028, Bensen Dep., ECF No. 230-4 at 165:11-20, 166:11-13, 168:2-6.

51. Bensen also provided the Ohio Republican map drawers with custom “election averages”—or “EA”—indices, which blended together the results of multiple elections. Trial Ex. P014, Bensen Dep., ECF No. 230-4 at 98:4-5, 99:3-11; Trial Ex. P018 at 7 (reflecting all of the “EA” indices contained in the Polidata files used by the Ohio Republican map drawers); Bensen Dep., ECF No. 230-4 at 97:22-100:13, 129:10-130:3, 130:8-131:8; *see* Trial Ex. P013, Bensen Dep., ECF No. 230-4 at 94:11-25.

52. As with the data on individual elections, these EA indices could be viewed at both the census block and congressional district levels. Bensen Dep., ECF No. 230-4 at 117:16-118:2 (district level), 122:12-24 (block level); *see* Trial Ex. P018 at 7 (block level).

C. Speaker Boehner’s team sought to lock in the Republican’s eight-seat advantage—and the Ohio Republicans effectuated it.

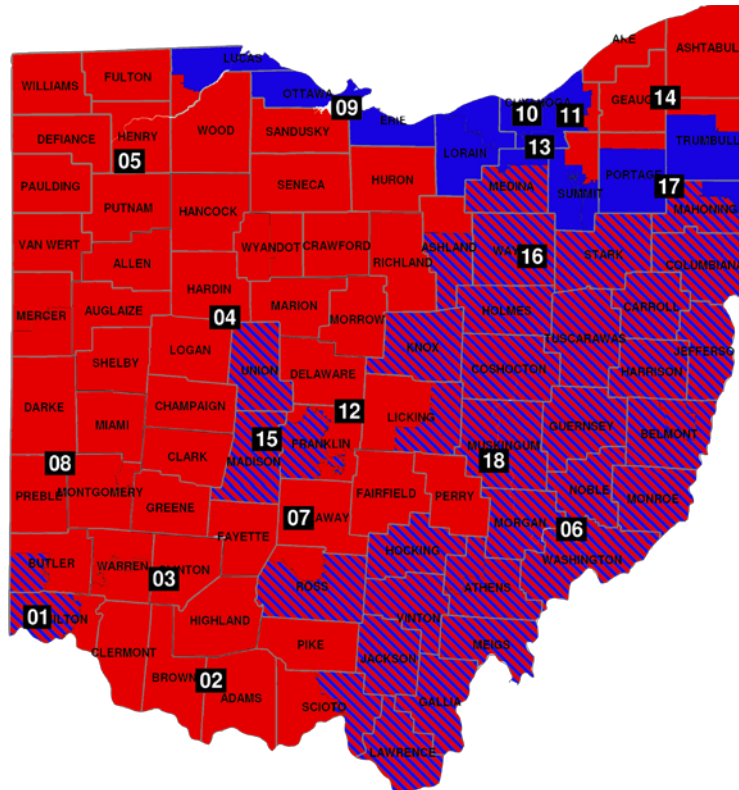
1. *The 2010 elections were a high-water mark for Republicans, who sought to entrench their eight-seat advantage through the 2011 redistricting.*

53. Under the pre-2011 congressional map, Republicans held between eight and 13 of Ohio’s 18 congressional seats. Trial Exs. J12-J16. Several of the congressional districts—the 1st, 6th, 15th, 16th, and 18th—flipped between Republican and Democrats across election

² Plaintiffs’ trial exhibits P046-P061 are screenshots of each congressional district in H.B. 369 as enacted and the data corresponding to each district that the map drawers had available in Maptitude as they were drawing maps in 2011. Trial Exs. P046-P061; Blessing Dep., ECF No. 230-5 at 97:14-24, 118:16-18, 119:6-11, 122:23-123:6, 131:14-23, 133:9-16; Joint Maptitude Stipulation, Schedule A.

cycles. *Id.* For example, in the 2008 elections, Democrats won all five of those districts and thus held a majority (10) of Ohio's 18 congressional seats. Trial Ex. J15.

54. As set forth below, the eight districts colored in red consistently elected Republicans; the five blue districts consistently elected Democrats; and the purple/cross-hatch districts switched hands between the two parties between 2002 and 2010. *See* Trial Exs. J12-J16.



55. The 2010 election was a wave election for Republicans across the nation, including Ohio. *See* Trial Ex. P293, RSLC Jan. 3, 2013 REDMAP Memo at 3-4. That year, Republicans won seats held by Democrats in the 1st, 6th, 15th, 16th, and 18th congressional districts, achieving a high-water mark in their share of the Ohio congressional delegation that decade: 13 out of 18 seats. Trial Exs. J12-J16.

2. *Speaker Boehner directed his political team to craft a congressional map that locked in the Republican's eight-seat advantage.*

56. Following the 2010 Census, Ohio's congressional delegation was reduced from 18 seats to 16 seats, resulting in an overall loss of two seats from the state's delegation. Trial Ex. J01 at 14:2-11.

57. After the 2010 election, then-Speaker of the U.S. House of Representatives John Boehner directed his political team to work with the Republican members of the Ohio congressional delegation to identify priorities associated with the forthcoming redistricting process. Whatman Dep., ECF No. 230-52 at 25:18-26:12 (describing Team Boehner's political activities), 27:16-25 (explaining that he was assigned by Boehner to work on redistricting), 29:15-30:3 (describing responsibilities as liaison with Republican members of Congress).

58. Speaker Boehner assigned Tom Whatman, a senior member of his political operation ("Team Boehner") and a veteran of the 2001 redistricting cycle, to work on restricting in Ohio. *Id.* at 25:18-26:12, 27:16-25. Among other things, Whatman was tasked with serving as the liaison between Ohio's Republican members of Congress and the Republican map drawers in Ohio. *Id.* at 29:15-30: 3; *see also id.* at 28:12-29:3 (stating that he was told by Boehner that he "was going to be the point person on redistricting for him [Boehner]"); *see also* Kincaid Dep., ECF No. 230-27 at 66:18-20, 66:24-67:4. Ohio's Republican members of Congress knew Whatman well from his work on Team Boehner's other political activities. *See* Stivers Dep., ECF No. 230-46 at 46:17-20.

59. The Ohio map drawers collaborated with Whatman because "[P]resident [Niehaus] . . . was very interested in what the Speaker of the United States House of Representatives thought about the map." DiRossi, ECF No. 243 at 259:15-18. As DiRossi

explained, “I couldn’t pick up the phone and call Speaker Boehner. So this was the kind of way to which I would send information or receive suggestions.” *Id.* at 259:19-22.

60. Whatman enlisted Adam Kincaid, the Redistricting Coordinator of the National Republican Congressional Committee (“NRCC”), to create a proposed map for the Ohio legislature. Whatman Dep., ECF No. 230-52 at 30:5-31:2; Kincaid Dep., ECF No. 230-27 at 51:17-23, 60:5-9; Kincaid Dep. Vol. II, ECF No. 230-28 at 273:13-22, 273:24-274:12, 274:14-20. Kincaid and Whatman worked in the same building in Washington, D.C.—as did RNC redistricting expert, Hofeller. Kincaid Dep., ECF No. 230-27 at 51:19-52:21.

61. Whatman met with Ohio’s Republican members of Congress about their redistricting priorities and used the information he gleaned to formulate a proposal for the new congressional districts. Whatman Dep., ECF No. 230-52 at 29:15-30:3. Whatman then instructed Kincaid to create the actual map that would be presented to the Ohio Republican map drawers. *Id.* at 30:5-31:2; Kincaid Dep. Vol. II, ECF No. 230-28 at 273:13-22, 273:24-274:12, 274:14-20.

62. Whatman and Kincaid refined their proposal through early fall 2011, meeting with Republican members of Congress in person “to receive feedback from them and from others via them on what to include or not include in a proposal for the Ohio legislature.” Whatman Dep., ECF No. 230-52 at 31:19-32:9; *see also* Kincaid Dep., ECF No 230-27 at 89:2-7, 89:12-16, 89:25-90:3, 90:11-22, 91:7-9, 91:16-92:5, 92:13-21, 93:5-12, 93:18-94:7, 94:23-95:9, 95:16-17, 95:24-96:8, 96:16-97:8, 97:11-14, 97:16-98:2, 98:8-14, 98:20-22, 99:8-100:10, 100:20-101:3, 101:19-21, 102:4-7, 102:11, 103:7-11, 103:17-19, 104:4-8, 105:2-9 (describing meetings with Representatives Jim Renacci, Steve Austria, Michael Turner, Steve Stivers, Bob Gibbs, Steve LaTourette, Jean Schmidt, Bill Johnson, and Patrick Tiberi); Kincaid Dep. Vol. II, ECF

No. 230-28 at 273:13-22, 273:24-274:12, 274:14-20 (summarizing redistricting work). Between August and September 2011, Kincaid met with Representative LaTourette between 15 and 30 times to discuss redistricting, always in person. Kincaid Dep., ECF No. 230-27 at 96:16-97:8, 97:11-14, 97:16-24.

63. Kincaid provided Republican members of Congress with district-specific political analyses of their districts under the proposal, even as it was being drafted. Kincaid Dep. Vol. II, ECF No. 230-28 at 543:18-25, 544:3-4, 544:6-9, 544:11-13, 544:15-17, 544:19-21, 544:23-545:2 (stating that he provided members of Congress with district-specific spreadsheets analyzing their districts before H.B. 319 was enacted); *see also id.* at 346:15-17, 346:19-347:2, 347:4.

64. Among the determinations made by Whatman and the Ohio Republican congressional delegation was which incumbents to pair under the new map. *See* Batchelder Dep., ECF No. 230-3 at 25:14-17, 26:4-12. The proposal paired three sets of incumbents into new congressional districts, including two Republicans incumbents in the 10th Congressional District: Representatives Michael Turner and Steve Austria. Whatman came up with the idea to pair Representatives Turner and Austria, and then presented the idea to Speaker Boehner for his approval. Whatman Dep., ECF No. 230-52 at 38:11-14, 38:23-39:3. Besides Boehner, no one else had input on the proposal or signed off on it. *Id.* at 38:11-21.

65. After Boehner approved of the idea, Whatman met with Representative Austria to explain the decision. *Id.* at 38:11-14, 38:23-39:3.

66. Ohio Republicans were not involved in determining which incumbents would be paired. Batchelder Dep., ECF No. 230-3 at 26:4-12. Then-Speaker of the Ohio House of Representatives William Batchelder had no in-depth involvement in the decision. *Id.* at 26:18-22. Indeed, he “[does not] have a clue” as to how the decision was made to pair Representatives

Turner and Austria, which resulted in Representative Austria losing his seat. Batchelder, ECF No. 246 at 48:25-49:6.

67. Whatman began working on redistricting in Ohio in early 2011, and by late August 2011, Whatman and Kincaid had finalized their map proposal. Whatman Dep., ECF No. 230-52 at 31:19-32:9. Speaker Boehner signed off, and Whatman then presented it to Ohio's Republican legislative leaders for their consideration. *Id.* at 38:7-9, 38:23-39:3, 94:6-11.

68. Whatman and Kincaid continued working closely with Ray DiRossi and Heather Mann, who were engaged by the Ohio Republican caucus, to fine-tune the map after it was presented to Republican legislative leaders for their consideration. Kincaid Dep. Vol. II, ECF No. 230-28 at 336:20-21; Defs.' Answer, ECF No. 68, ¶ 52; Trial Ex. P515 (consulting agreement between Republican members of the Task Force and Capital Advantage LLC/Ray DiRossi); Trial Ex. P516 (consulting agreement between Republican members of the Task Force and Policy Widgets LLC/Heather Mann). According to Kincaid, the map drawing process was a "collaborative" effort between national Republicans and Ohio map drawers. *See* Kincaid Dep. Vol. II, ECF No. 230-28 at 313:16-25 ("It was a collaborative process"); *id.* at 336:20-21 ("It was a collaborative process, like I said before.").

3. *Republican leaders were committed to enacting a map that Speaker Boehner fully supported.*

69. Ohio Republicans wanted to enact a congressional map that Speaker Boehner supported, and they deferred to Whatman and his team as a result. Whatman Dep., ECF No. 230-52 at 131:3-7; DiRossi Dep., ECF No. 230-12 at 271:14-17.

70. Both Republican leaders of the General Assembly solicited Boehner's input on the congressional map. *See* DiRossi Dep., ECF No. 230-12 at 271:14-17; Batchelder, ECF No. 246 at 26:20-27:8. Speaker Batchelder, who served with Boehner in the Ohio House, spoke with

Boehner approximately once a month during the redistricting process. Batchelder, ECF No. 246 at 37:8-9; Batchelder Dep., ECF No. 230-3 at 27:6-8. During this period, he met with Boehner in person in Washington, D.C., and later in Columbus. Batchelder Dep., ECF No. 230-3 at 46:9-47:3.

71. Moreover, Speaker Batchelder's subordinates and colleagues, including then-Majority Leader in the Ohio House Huffman and Mann, communicated frequently with Team Boehner. *Id.* at 76:10-13, 135:8-13. Based on these conversations, Batchelder developed "an idea" of what Boehner wanted through redistricting and relayed Boehner's requests to Ohio Republican map drawers, including Mann. *Id.* at 134:6-13.

72. President Niehaus himself told Whatman, days before the passage of H.B. 319, that he was "committed to ending up with a map that Speaker Boehner fully supports." Trial Ex. P584 (email from President Niehaus to Whatman on Sept. 11, 2011). As a result, Whatman understood that "the Ohio legislature wanted to come up with a map that Speaker Boehner supported." Whatman Dep., ECF No. 230-52 at 131:3-7; *see also* Schuler Dep., ECF No. 230-43 at 146:9-147:16.

73. While Batchelder did not meet with Speaker Boehner in connection with H.B. 369, he already knew what Boehner wanted. This was based on conversations he had with Boehner prior to the enactment of H.B. 319 and the contact between his intermediaries like Troy Judy and members of Boehner's team. Batchelder Dep., ECF No. 230-3 at 76:10-13, 133:10-134:19, 135:2-13.

74. Batchelder does not recall considering any changes to the congressional map that went against Boehner's wishes. *Id.* at 135:2-7; *see also* Trial Ex. P299 (email between Johnson and Weaver dated July 18, 2011).

D. Republicans drew proposed maps in secret and used political indices to craft their desired 12-4 map.

1. Republicans' paid consultants drew proposed maps in secret.

75. Beginning in July 2011, the Republican redistricting operation was based out of a secret hotel room at the DoubleTree Hotel in Columbus, Ohio. Trial Ex. P109 (DoubleTree Hotel invoice dated July 12, 2011 for the Bunker setting forth the rental dates); DiRossi Dep., ECF No. 230-12 at 145:7-146:20; *see also* Trial Ex. P359, Ohio Redistricting Transparency Report at 14 n.40; DiRossi, ECF No. 243 at 216:5-7 (identifying the hotel room as room 601), 213:3-214:2. Throughout the redistricting process, Ohio and national Republicans generally referred to the room as the “Bunker.” Defs.’ Answer, ECF No. 68, ¶ 57; Trial Ex. P110 (Sept. 15, 2011 appointment to “[m]eet with Niehaus at Bunker”); Trial Ex. P111 (DiRossi emails from Aug.-Sept. 2011); DiRossi Dep., ECF No. 230-12 at 150:9-17, 156:4-15; Judy Dep., ECF No. 230-26 at 62:22-63:5; Whatman Dep., ECF No. 230-52 at 91:22-23.

76. Access to the Bunker was limited to Republicans, who used the private hotel room to draw and assess maps and hold closed-door meetings to discuss the map-drawing process. DiRossi Dep., ECF No. 230-12 at 142:21-143:11, 148:6-149:9, 149:20-22, 158:5-15, 159:2-13, 159:19-22, 160:4-7, 162:6-18, 163:20-164:10; *see* Blessing Dep., ECF No. 230-5 at 62:20-63:8; Judy Dep., ECF No. 230-26 at 64:7-12, 68:6-25.

77. In early August 2011, Schuler and Judy formally engaged Ray DiRossi and Heather Mann as private consultants to undertake research and prepare draft congressional maps for the Republican members of the Legislative Task Force on Redistricting, Reapportionment, and Demographic Research. Defs.’ Answer, ECF No. 68, ¶ 52; DiRossi Dep., ECF No. 230-12 at 75:11-76:5; Blessing Dep., ECF No. 230-5 at 28:13-29:4, 31:24-32:3; Judy Dep., ECF No. 230-26 at 126:4-22, 128:15-23, 129:10-25; Trial Ex. P515 (DiRossi’s consultancy agreement);

Trial Ex. P516 (Mann’s consultancy agreement). Mann and DiRossi each were paid over \$100,000 for this work. Trial Ex. P503 (payment vouchers to Capital Advantage LLC, DiRossi’s company, and Policy Widgets LLC, Mann’s company, each totaling \$105,000); Blessing Dep., ECF No. 230-5 at 55:10-12.

78. Mann and DiRossi were actively planning for congressional redistricting prior to the commencement date of their consultancy agreements. *See* Trial Ex. P070 at SENATE000001 (June 6, 2011 memo from Mann to Batchelder, Huffman, Judy, and Lenzo, proposing a schedule for redistricting based on the advice of Braden), Blessing Dep., ECF No. 230-5 at 158:19-159:18; Trial Ex. P069 (July 1, 2011 email from Mann setting up weekly “meetings on redistricting” after speaking with “Matt and Troy”), Blessing Dep., ECF No. 230-5 at 152:6-20; Trial Ex. P037 (July 5, 2011 email from DiRossi setting up the Unified Index); Trial Ex. P106 (July 7, 2011 meetings agenda listing DiRossi as “Redistricting Staff” and Mann as “Redistricting Director,” and both attending meetings with Morgan and Braden); *see also* DiRossi Dep., ECF No. 230-12 at 98:12-99:9 (testifying to conversations regarding redistricting that he had in July 2011); Judy Dep., ECF No. 230-26 at 130:2-19 (noting that Mann was working on redistricting before she was hired as a consultant).

79. Before serving as private redistricting consultants, Mann and DiRossi each had extensive experience in Ohio Republican politics. Mann began working for the Ohio House Republican caucus in 2004 and has never reported to a Democratic member during her tenure with the General Assembly. Blessing Dep., ECF No. 230-5 at 26:19-27:12, 27:22-29:4, 32:20-33:19; Judy Dep., ECF No. 230-26 at 130:2-6. Immediately prior to her engagement as an outside redistricting consultant, Mann served as Deputy Legal Counsel, as well as the “Redistricting Director,” for the Ohio House Republican caucus. Blessing Dep., ECF No. 230-5

at 32:20-34:5; *see* Trial Ex. P106, July 7, 2011 meetings agenda at LWVOH_00008707 (listing Mann as “Deputy Legal Counsel & Redistricting Director”). She currently works as Deputy Legal Counsel to the Ohio House Republican caucus. Blessing Dep., ECF No. 230-5 at 33:14-19.

80. DiRossi began his career working for Republican members of the General Assembly, including then-Speaker of the House Republican Jon Husted from 2005 to 2008. DiRossi, ECF No. 243 at 206:11-19. Thereafter, DiRossi worked as an outside fundraiser for the Ohio Republican Senate Campaign Committee from 2008 to 2014. DiRossi Dep., ECF No. 230-12 at 24:11-26:4. DiRossi was still working as a Republican fundraiser when he began working on congressional redistricting in July 2011. DiRossi, ECF No. 243, at 215:5-15; *compare* Trial Ex. P109 (DoubleTree hotel invoice listing July 17, 2011 as the start date), *with* Trial Ex. P515, DiRossi consultancy agreement at LWVOH_00005475-5477 (commencing on August 1, 2011); *see also* DiRossi Dep., ECF No. 230-12 at 98:12-99:9 (DiRossi had conversations about redistricting with Niehaus, Schuler, and Mann in July 2011). DiRossi currently serves as the Finance Director for the Ohio Senate and reports to Republican Senate President Defendant Larry Obhof. DiRossi, ECF No. 243 at 146:8-9; DiRossi Dep., ECF No. 230-12 at 27:6-28:8.

81. After being engaged by Judy and Schuler, Mann and DiRossi rendered services exclusively to the Republican members of the Task Force and reported directly to Republican leaders in the General Assembly. DiRossi, ECF No. 243 at 209:25-210:3; Judy Dep., ECF No. 230-26 at 129:20-25; DiRossi Dep., ECF No. 230-12 at 75:11-76:5.

82. Mann reported to Speaker Batchelder throughout the mapdrawing process. Blessing Dep., ECF No. 230-5 at 34:15-17, 35:7-9, 59:25-60:3.

83. DiRossi reported primarily to Senate President Niehaus and secondarily to Speaker Batchelder. DiRossi, ECF No. 243 at 152:3-6; DiRossi Dep., ECF No. 230-12 at 305:8-9; Niehaus Dep., ECF No. 230-37 at 67:8-12, 72:24-73:3.

84. Along with national Republicans, Mann, DiRossi, and Judy were the primary Republican staffers who drew and analyzed proposed congressional district maps in the Bunker prior to the introduction of H.B. 319. *See* Blessing Dep., ECF No. 230-5 at 47:15-49:14, 49:23-50:13; Bensen Dep., ECF No. 230-4 at 34:2-3; DiRossi Dep., ECF No. 230-12 at 94:25-95:19; Judy Dep., ECF No. 230-26 at 21:20-22:9, 73:18-74:13; Batchelder Dep., ECF No. 230-3 at 71:15-22; Schuler Dep., ECF No. 230-43 at 130:11-23.

85. All of the hotel furniture was moved out of the Bunker in order to clear space for the redistricting equipment. DiRossi, ECF No. 243 at 212:7-213:2. Keycards were needed to access the Bunker. *Id.* at 216:5-7. And no Democrats were seen in the Bunker. *Id.* at 219:22-220:2.

86. There were three computers in the Bunker, two of which were used primarily by Mann and DiRossi and the third of which Judy used when working in the Bunker. Judy Dep., ECF No. 230-26 at 63:2-21. Mann, DiRossi, and Judy were the only people with passwords to the computers. *Id.* at 64:21-65:10; DiRossi Dep., ECF No. 230-12 at 85:17-86:7.

87. Mann, DiRossi, and Judy used these computers to draw and edit congressional district maps using redistricting software called “Maptitude.” Judy Dep., ECF No. 230-26 at 65:18-23; Blessing Dep., ECF No. 230-5 at 38:20-25; DiRossi Dep., ECF No. 230-12 at 84:13-16. H.B. 319 was primarily drawn in the Bunker. DiRossi, ECF No. 243 at 221:9-11.

2. *The map drawers regularly briefed Ohio Republican leaders on the proposed districts using political indices.*

88. During the summer of 2011, Mann, DiRossi, Judy, Batchelder, Niehaus, Huffman, Faber, Husted, Schuler, Lenzo, Morgan, and Braden visited the Bunker to view draft maps and associated political data. DiRossi Dep., ECF No. 230-12 at 158:5-15, 159:19-22, 160:4-7, 162:6-18, 163:20-164:15; Blessing Dep., ECF No. 230-5 at 39:17-40:6, 40:16-21, 62:20-63:8; Niehaus Dep., ECF No. 230-37 at 43:16-21, 67:17-68:2; Faber Dep., ECF No. 230-13 at 58:15-25; Judy Dep., ECF No. 230-26 at 43:20-44:16, 74:14-75:3; Huffman Dep., ECF No. 230-19 at 49:19-50:2; Lenzo Dep., ECF No. 230-29 at 38:2-8; Morgan Dep., ECF No. 230-34 at 51:11-25; *see also* Trial Ex. P109, DoubleTree hotel invoice (Bunker rented from July 17 - October 15, 2011).

89. Whatman also visited the Bunker at least once in order to review draft congressional district maps prepared by Mann and DiRossi. Whatman Dep., ECF No. 230-52 at 90:10-18, 91:5-10, 92:11-17.

90. Prior to the introduction of H.B. 319, the map drawers hosted meetings in the Bunker and the Speaker's Office in the Ohio State Capitol with Batchelder, Huffman, and other Republican leaders. Judy Dep., ECF No. 230-26 at 41:6-10, 43:14-46:19. At these meetings, hardcopy spreadsheets containing the Unified Index scorings for each district in draft maps were distributed. *Id.* at 43:14-44:25, 45:16-47:14, 47:23-48:5, 48:9-15, 52:24-54:18; *see* Blessing Dep., ECF No. 230-5 at 84:7-23, 85:3-10, 93:10-13. Legislative leaders also reviewed political index scorings during such meetings on computer screens and printouts of draft maps. *See* Schuler Dep., ECF No. 230-43 at 124:14-25 (testifying he viewed maps on computer screens in the Bunker); *id.* at 137:18-138:20 (testifying he reviewed maps containing political index data in meetings with Niehaus and Batchelder at the Bunker); Faber Dep., ECF No. 230-13 at 135:10-

25, 136:10-12 (testifying he looked at maps on computer screens in the Bunker); Lenzo Dep., ECF No. 230-29 at 36:13-37:6, 38:2-8 (testifying he viewed three “options for [H.B.] 319” at a meeting in the Bunker with Speaker Batchelder and President Niehaus). Batchelder’s preference was for hardcopy documents. Batchelder, ECF No. 246 at 29:10-13.

91. Throughout the map-drawing process, Judy regularly visited the Bunker to supervise Mann’s work and report back to Speaker Batchelder on the progress of the map-drawing process. Judy Dep., ECF No. 230-26 at 24:14-21, 25:2-8, 64:7-12; *see* Blessing Dep., ECF No. 230-5 at 48:21-49:2, 49:23-50:9, 50:19-51:14; Batchelder Dep., ECF No. 230-3 at 38:10-22. During these visits, Mann provided progress updates to Judy, and he reviewed draft maps and proposed districts. Judy Dep., ECF No. 230-26 at 28:16-24, 67:20-68:16; Blessing Dep., ECF No. 230-5 at 36:20-37:4, 49:23-50:3, 50:19-51:14. Judy also discussed the political index scorings of districts with Mann. Judy Dep., ECF No. 230-26 at 67:24-68:25, 69:11-70:11. Throughout the process, Judy served as Batchelder’s intermediary, relaying his instructions and desires to the map drawers. Batchelder Dep., ECF No. 230-3 at 39:16-25. People knew that when they talked to Judy about redistricting, they were talking to Batchelder. Batchelder, ECF No. 246 at 30:8-11; Batchelder Dep., ECF No. 230-3 at 38:10-18.

92. Judy and Mann regularly reported on the progress of the map-drawing process in the Bunker to Batchelder and other legislative leaders, and shared draft maps for Batchelder’s review and approval. Blessing Dep., ECF No. 230-5 at 36:12-37:9, 39:2-8, 40:3-6, 40:19-21, 56:9-19; *see* Trial Ex. P080 (Sept. 1, 2011 email from Mann to DiRossi, Lenzo, and Judy attaching a display that “Mark Braden wants to show the principals in the meeting tomorrow”), Braden Dep., ECF No. 230-7 at 104:3-21 (testifying that “the principals” referenced in the email referred to the legislative leaders and senior staff). Judy discussed redistricting and the

congressional district maps with Batchelder repeatedly during this period, and Mann discussed draft maps with Huffman. Judy Dep., ECF No. 230-26 at 24:12-21, 25:4-8, 25:18-22, 41:6-10; Batchelder Dep., ECF No. 230-3 at 38:19-23; Blessing Dep., ECF No. 230-5 at 61:21-62:5.

93. DiRossi shared progress updates from the Bunker with Senate President Niehaus, who requested to see political index information. Niehaus Dep., ECF No. 230-27 at 43:3-21; DiRossi Dep., ECF No. 230-12 at 246:25-247:15. DiRossi also sent Niehaus draft maps for review. Trial Ex. P126 at LWVOH_00018298 (Sept. 12, 2011 email from DiRossi to Niehaus attaching draft map). DiRossi and Mann also shared updates and draft maps with Schuler, who was interested in viewing the political data and how the districts were being formed. Schuler Dep., ECF No. 230-43 at 130:11-131:14; Niehaus Dep., ECF No. 230-37 at 68:7-24; *see* Trial Ex. P543 (Aug. 16, 2011 email from DiRossi to Schuler regarding meeting in the Bunker).

94. As the map-drawing process progressed, DiRossi kept Niehaus, Ohio Senate Pro Tempore Keith Faber, and Schuler informed of any changes to the Unified Index scorings for proposed districts based on adjustment to the map. Trial Ex. P126, Sept. 12, 2011 email exchange at LWVOH_00018298-301, DiRossi Dep., ECF No. 230-12 at 275:2-9, 275:19-277:3, 277:22-278:24; Niehaus Dep., ECF No. 230-37 at 137:13-18; *see also* Trial Ex. P128 at LWVOH_00018322 (Sept. 12, 2011 email from DiRossi to Kincaid informing that he was “working to get sign off from Speaker Batchelder and President Niehaus on th[e] Stivers edit” to the map).

95. Following the enactment of H.B. 319, Republicans continued to share political data among themselves as they worked on H.B. 369. Judy Dep., ECF No. 230-26 at 46:20-47:14. In particular, Judy reviewed “comparison spreadsheets” that included Unified Index scorings for each district. *Id.* at 48:6-19; *see also* Trial Ex. P135 at DIROSSI_0000518

(spreadsheet comparing various congressional district plans using the Unified Index scorings of each district); Trial Ex. P615, Def. Obhof's Am. Response to Pls.' First Set of Requests for Admission at 4 (admitting, per the metadata, that the document's native file name is "heather **Plan Comparison.xlsx**" and that the document was created on November 5, 2011, and last modified on November 10, 2011 by Ray DiRossi) (emphasis added); Trial Ex. P041 at BLESSING0012553 (spreadsheet comparing various congressional district plans using the Unified Index scorings of each district); Trial Ex. P615, Def. Obhof's Am. Response to Pls.' First Set of Requests for Admission at 3 (admitting, per the metadata, that the document's native file name is "**Plan Comparison (Revised).xlsx**" and that the document was created on November 5, 2011, and last modified on November 22, 2011) (emphasis added); Trial Ex. P042 at BLESSING_0013212 (spreadsheet comparing various congressional district plans using the Unified Index scorings of each district); Trial Ex. P615, Def. Obhof's Am. Response to Pls.' First Set of Requests for Admission at 3-4 (admitting, per the metadata, that the document's native file name is "**Plan Comparison (Revised 12-14-11).xlsx**" and that the document was created on November 5, 2011, and last modified on December 14, 2011, the same day on which H.B. 369 was passed by the General Assembly) (emphasis added). The map drawers updated the "comparison spreadsheets" to evaluate new congressional map proposals. Judy Dep., ECF No. 230-26 at 48:6-19.

96. During this time, Judy and Mann continued to generate Unified Index and '08 McCain index scorings on their computers for congressional map proposals. *See* Trial Ex. P025 at Bensen_0000063 (Nov. 9, 2011 email from Mann to Bensen including index scorings she and Judy generated); Bensen Dep., ECF No. 230-4 at 162:20-163:4. DiRossi and Mann were the

people who ultimately drafted H.B. 369. DiRossi, ECF No. 243 at 221:12-223:6. This time they drafted it in the State House. *Id.*

97. In light of the consistent pattern of briefings regarding the political scorings of proposed congressional districts, Speaker Batchelder testified that Mann was relying on political scorings while drawing maps, “[b]ecause that was, in effect, her assignment, to try to come [up with] districts that were friendly.” Batchelder Dep., ECF No. 230-3 at 71:15-22.

3. *Republican map drawers relied on an index that understated Republican strength and overstated the competitiveness of proposed districts.*

98. Republican map drawers created the so-called “Unified Index” in the summer of 2011 to guide the map-drawing process. Trial Ex. P013 (July 10, 2011 DiRossi email choosing five races to include in the Unified Index), Bensen Dep., ECF No. 230-4 at 94:18-25; *see* Blessing Dep., ECF No. 230-5 at 75:19-22; DiRossi Dep., ECF No. 230-12 at 111:23-112:7, 112:18-113:20.

99. The Unified Index consisted of an average of election results from the 2004 presidential, 2006 Auditor, 2006 Attorney General, 2008 presidential, and 2010 gubernatorial elections. Trial Ex. P013 (July 10, 2011 DiRossi email choosing five races to include in Unified Index), Bensen Dep., ECF No. 230-4 at 94:18-25; Trial Ex. P040 at DIROSSI_0000014 (Final political index used); DiRossi Dep., ECF No. 230-12 at 112:18-113:20.

100. At the legislative leadership level, choosing an index was Huffman’s assignment. Batchelder Dep., ECF No. 230-3 at 210:21-211:13, 213:20-23. At the operational level, DiRossi created the Unified Index. Trial Ex. P038 (July 5, 2011 DiRossi emails regarding standardizing political indexes); Trial Ex. P013 (July 10, 2011 DiRossi email choosing five races to include in Unified Index); DiRossi Dep., ECF No. 230-12 at 111:23-112:7, 112:18-113:20.

101. The Unified Index was comprised of elections that understated the Republican percentage of a district as compared to the full set of contested statewide elections during the decade preceding the 2010 redistricting cycle. In particular, the Unified Index did not include any 2002 statewide elections, in all of which the Republican candidate received between 53.32% and 64.32% of the votes cast for the particular office. *See* Trial Ex. J12 at 11-31 (election results for 2002 statewide races); *see also infra* Section VI; Def. Ohio Secretary of State Jon Husted's Response to Pls.' First Set of Requests for Admission ("Husted RFA Response") at 5(a)-(c) & Exs. A-C (Nov. 29, 2011). The Unified Index also did not include the 2004 Senate election in which the Republican candidate received 63.85% of the vote. Trial Ex. J13 at 11-31 (election results for 2004 statewide races); *see also infra* Section VI; Husted RFA Response at 5(e) & Ex. E.

102. Further, the Unified Index included only one 2010 election: the 2010 gubernatorial race, in which the Republican candidate received under 50% of the vote. *See* Trial Ex. J16 (election results for 2010 statewide elections); *see also infra* Section VI; Husted RFA Response at 7(p) & Ex. P. The Unified Index did not include the 2010 Senate, Auditor, Secretary of State, or Treasurer elections, in each of which the Republican candidate received over 50% of the votes cast. *See* Trial Ex. J16 (election results for 2010 statewide elections); *see also infra* Section VI; Husted RFA Response at 7(o), 7(q), 8(r)-(s) & Exs. O, Q, R, S.

103. However, the Republican map drawers had political data available in Maptitude for every contested statewide election held between 2002 and 2010. *See* Trial Exs. P018, P046-P061 (reflecting the data corresponding to each congressional district that the map drawers had available in Maptitude as they were drawing maps in 2011); Trial Ex. P028, Bensen Dep., ECF

No. 230-4 at 168:2-6; *supra* note 2; *see also* “Race Codes” Table, *supra* ¶ 49; Hood, ECF No. 247 at 225:5-12.

104. On average, the Unified Index understated the Republican percentage of a district by 3.2 percentage points. Demonstrative Trial Ex. PD099 (citing to Trial Ex. D04, Hood Report at 15; Trial Exs. P045-P061, P261; Demonstrative Trial Ex. PD090); Hood, ECF No. 247 at 224:11-13.

105. As a result, the 12 Republican districts drawn in H.B. 369 are even less competitive when scored under an index comprised of the full set of statewide contested elections held in the decade preceding the 2010 redistricting cycle. Demonstrative Trial Ex. PD096 (citing to Trial Ex. D04, Hood Report at 15; Trial Exs. P045-P061, P261; Demonstrative Trial Ex. PD090); Hood, ECF No. 247 at 224:1-2 (testifying that “there are more competitive districts under the unified index” than under an index that includes the full set of statewide contested elections for the decade preceding the 2010 redistricting cycle).

106. Evaluating proposed districts using an underweighted Republican index allowed the map drawers to be confident that Republican members of Congress would not lose control of their seats even in a cycle that heavily favored Democratic candidates. *See* Trial Ex. P262 (Partisan Classification of Ohio’s Congressional Districts, 2012); Demonstrative Trial Ex. PD096 (citing to Trial Ex. D04, Hood Report at 15; Trial Exs. P045-P061, P261; Demonstrative Trial Ex. PD090); Hood, ECF No. 247 at 223:16-224:2, 224:19-24.

107. Using an underweighted Republican index also allowed the Republicans to present their map as more competitive than it in fact was. *See* Hood, ECF No. 247 at 223:21-224:2 (testifying that the Unified Index classifies more districts as competitive than does an index that includes all contested statewide races available as of the 2010 redistricting cycle);

Trial Ex. J22, H.B. 369 Huffman Sponsor Testimony at 2 (Huffman emphasizing in his sponsor testimony on H.B. 369 that the Republicans “chose to rely” upon the Unified Index).

E. National and state Republicans agreed to draw a 12-4 map by packing and cracking Democratic voters.

1. *The Republicans were determined to preserve their eight-seat advantage through a 12-4 map.*

108. Almost immediately after the release of the 2010 Census data in March 2011, Republicans began discussing options for preserving their gains from the 2010 election. *See* Trial Ex. P551 (March 22, 2011 Carozza email to Stivers); *see* Stivers Dep., ECF No. 230-46 at 32:12-33:19. In early March 2011, for instance, newly-elected Ohio Secretary of State Jon Husted discussed with staff to newly-elected Representative Steve Stivers of the 15th District a “12-4 redistricting map scenario that . . . [Stivers and his staff] would like.” *Id.*

109. National Republicans and Ohio Republicans coalesced around the idea of creating a map that would guarantee Republicans 12 congressional seats (a “12-4” map). *See* Trial Ex. P407, September 7, 2011 Whatman email to Niehaus; Batchelder Dep., ECF No. 230-3 at 25:7-17. Under a 12-4 map, one Republican incumbent and one Democrat incumbent would lose their seats, but Republicans’ eight-seat advantage would be preserved. *See* Batchelder Dep., ECF No. 230-3 at 25:7-17.

110. Republicans’ creation of a 12-4 map was motivated by their desire to preserve the eight-seat advantage they gained during the 2010 election, not to protect incumbents. *See infra* Section V.B. Ohio Republicans minimized the importance of incumbent protection on the floor of the Ohio House of Representatives. Trial Ex. J01, Sept. 15, 2011 House Session Tr. at 18:14-19:2. Republicans also unnecessarily paired three sets of incumbents, when a 12-4 map could have paired just two. Joint Uncontroverted Facts, ECF No. 212-1, ¶¶ 27-29; Niven, ECF No. 242 at 111:21-112:3. Moreover, the incumbents paired included senior members of the

delegation, undercutting the very purpose of protecting incumbency. *See* Joint Uncontroverted Facts, ECF No. 212-1, ¶¶ 27-29; Niven, ECF No. 242 at 111:21-112:8.

111. National Republican operatives Whatman and Kincaid incorporated the idea of a 12-4 map into their proposal for the Ohio legislature. By July 2011, spreadsheets created by Kincaid analyzing the political leanings of congressional districts under the proposal purport to show twelve Republican districts. *See* Trial Ex. P313, July 25, 2011 Ohio changes spreadsheet; Kincaid Dep. Vol. II, ECF No. 230-28 at 326:14-327:2, 327:4-9. Kincaid scored each of the congressional districts using various political data, including Kincaid's preferred metric—the Partisan Voter Index (“PVI”)—to compare them to the existing districts. *Id.* PVI score rates district as either Republican leaning, denoted by R+ or Democratic leaning denoted by a D+. *See* Kincaid Dep., ECF No. 230-27 at 30:3-34:4; *see also* DiRossi Dep., ECF No. 230-12 at 334:6-12. A point scale is then assigned to each district to signify how strongly Republican or Democratic leaning the district is with the higher numbers signifying a higher partisan lean. *See* Kincaid Dep., ECF No. 230-27 at 31:25-32:5. On a spreadsheet analyzing the proposal “as of July 25,” twelve districts fall between PVI scores of R+3 and R+10. Trial Ex. P313, July 25, 2011 Ohio changes spreadsheet. *See also supra* Section II.C.2.

112. Republicans' internal communications also reflected their desire to create a 12-4 map. For instance, on September 7, 2011, Whatman sent an email with the subject line “Talking Points” to Ohio Senate President Tom Niehaus. Trial Ex. P407; *see also* Trial Ex. P614 at 1-2 (stipulating that each of the emails in the email chain were sent and received by the individuals on the dates and times shown on the face of the emails). The email discussed changes Republicans made to congressional districts in southwest Ohio, specifically the pairing of Representatives Turner and Austria, which would necessarily result in the loss of a Republican

incumbent from the area. The email defended the change as necessary to “lock down 12 Republican seats.” Trial Ex. P407 at LWVOH_0052431; *see also* Trial Ex. P614. The email stated:

We have to recognize that we currently have five Republicans in southwest Ohio. In losing two seats, and ***trying to lock down 12 Republicans seats*** it is unrealistic to think southwest Ohio can remain the way it is. Having the Speaker from the region more than makes up for this loss.

Trial Ex. P407 at LWVOH_0052431 (emphasis added).)

113. Two days later, Whatman forwarded his email to Judy. Trial Ex. P407 at LWVOH_0052431. Judy soon after sent it to Ohio Republican map drawer Mann and asked if she could print a copy for Batchelder. *Id.* (email from Judy to Mann stating, “Can u print for WBG?”); Batchelder Dep., ECF No. 230-3 at 183:19-184:6 (Batchelder stating that he is often referred to as WGB and cannot think of another WGB that Judy would have been referring to in the email). Batchelder’s preference was for hardcopy documents. Batchelder, ECF No. 246 at 29:10-13.

114. The same message appeared days later on September 13, 2011 in a document titled “Congressional Redistricting Talking Points,” which Mann sent to Lenzo. Trial Ex. P385; *see also* Trial Ex. P614 (stipulating that Mann sent the email and attached the “Congressional Redistricting Talking Points,” as indicated by the face of the document). The document again stated that Republicans are “trying to lock down 12 Republican seats” and had to accept some changes to southwest Ohio as a result. Trial Ex. P385, Sept. 13, 2011 Talking Points at LWVOH_0052438.

115. Throughout the subsequent iterations of the maps, Republicans generated plans that consistently provided their party with a 12-4 seat advantage. For instance, analyses Kincaid generated to demonstrate how incumbents would perform in their new districts show 12

congressional districts with a PVI score between R+2 and R+14 under both H.B. 319 and H.B. 369. Trial Ex. P333 (scoring H.B. 319, the first congressional map passed by the General Assembly); Trial Ex. P499 (scoring H.B. 369, the second congressional map passed by the General Assembly); Kincaid Dep., ECF No. 230-27 at 218:5-8, 218:10-11, 218:15, 218:21-219:20; Kincaid Dep. Vol. II, ECF No. 230-28 at 300:7-14, 472:4-473:7, 473:9-474:12; *see infra* Section II.K.3.

116. Throughout the subsequent negotiations over changes to the map, Republicans consistently held firm on their demand that the map create 12 Republican districts. *See infra* Section II.J.5. As Speaker Batchelder explained, Ohio Republicans never considered changes that would deny them 12 congressional seats during those negotiations.

Q. Earlier we talked about how a map that would have given the Democrats a shot at five districts wasn't under consideration; is that right?

A. Correct.

Batchelder Dep., ECF No. 230-3 at 130:25-131:5.

2. *The Republicans briefly considered a 13-3 map, but set it aside as too risky.*

117. In early September 2011, Republicans considered adopting a new congressional map that would retain all 13 Republicans congressional seats, leaving just three seats for Democrats (a “13-3 map”). Defs.’ Answer, ECF No. 68, ¶ 61; *see also* Kincaid Dep. Vol. II, ECF No. 230-28 at 380:8-12, 380:14-16, 380:18, 387:13-24; Trial Ex. J03, Sept. 21, 2011 Senate Session Tr. at 12:17-18 (Faber acknowledging during September 21, 2011, Ohio Senate hearing that Republicans had discussed eliminating two Democratic seats); Trial Ex. P078, Sept. 6, 2011 4-Way Split Ohio Changes spreadsheet.

118. Indeed, a congressional map that Whatman presented to Ohio Republicans retained all 13 Republican seats by dividing Franklin County and the city of Columbus between four congressional districts. Kincaid Dep. Vol. II, ECF No. 230-28 at 379:19-20, 379:22-380:12 (describing map as having “four districts splitting up Franklin County”); *id.* at 393:8-12. Kincaid generated analyses showing the likely partisan scoring of congressional districts under the map, which was termed the “four-way split.” *Id.* at 381:20-25, 382:3-10, 382:12-21 (describing creation of analyses). The scoring indicated that the “four-way split” had “13 districts that could have sent a Republican to Congress and three that [could have] sent a Democrat.” *Id.* at 392:10-13, 392:15-20; *see also* Trial Ex. P078, Sept. 6, 2011 4-Way Split Ohio Changes spreadsheet.

119. However, enacting a 13-3 map would result in a smaller margin of victory in Republican-held districts than Republicans would have under alternative maps. Kincaid Dep. Vol. II, ECF No. 230-28 at 389:21-391:24, 392:2-13, 392:15 (acknowledging that Republican districts under the “four-way split” map had weaker PVI scores than under an alternative map); *see also* Trial Ex. P078 (PVI scores for “4-Way Split as of September 6” map); Trial Ex. P077 (PVI scores for “Franklin County Sinkhole” map). Kincaid’s contemporaneous analyses made clear that a 13-3 map risked more districts becoming competitive during a strong Democratic election year. Defs.’ Answer, ECF No. 68, ¶ 61; *see also* Trial Ex. P078, Sept. 6, 2011 4-Way Split Ohio Changes spreadsheet; Kincaid Dep. Vol. II, ECF No. 230-28 at 392:10-13, 392:15. Whatman, among others, favored maps that increased Republican strength in key districts. Kincaid Dep. Vol. II, ECF No. 230-28 at 353:13-17, 353:19-24.

120. For this reason, the internal congressional redistricting talking points, which Mann sent to Lenzo on September 13, 2011, encouraged Republicans to support the 12-4 map advanced by Speaker Boehner’s team. Trial Ex. P385, Congressional Redistricting Talking

Points at LWVOH_0052438; Trial Ex. P614 (stipulating that Mann sent “Congressional Redistricting Talking Points” document to Lenzo on September 13, 2011, as indicated on the face of the document); *see supra* Section II.E.1. According to the talking points:

This map is one that Speaker Boehner’s team has asked our caucus to support because it bolsters districts that were vulnerable going into a Presidential year with an incumbent Democrat at the top of the ticket.

Population loss has consequences for Ohio. Given the fact that the overall index for the State of Ohio is 49.5% on a measure of five recent races, it is a tall order to draw 13 “safe” seats. Speaker Boehner’s team worked on several concepts, but this map is the one they felt put the most number of seats in the safety zone given the political geography of the state, our media markets, and how best to allocate caucus resources.

Trial Ex. P385, Congressional Redistricting Talking Points at LWVOH_0052438.

F. In order to achieve a 12-4 map, national and Ohio Republicans designed a map around the “Franklin County Sinkhole.”

121. The centerpiece of Republicans’ effort to enact a 12-4 map was the creation of a new congressional district in Franklin County containing the city of Columbus, a proposal referred to by Republicans as the “Franklin County Sinkhole.” *See* Kincaid Dep. Vol. II, ECF No. 230-28 at 422:6-8 (“The architecture of [the] new map is one that creates a new Democrat seat in Franklin County”); *id.* at 370:12-16, 370:25-371:4, 371:6-8 (recalling that the phrase “Franklin County Sinkhole” was used in at least one meeting with Whatman in August or September 2011). The map secured 12 Republican seats by retaining Republican strength in the 2nd, 4th, 5th, 6th, 7th, 8th, 10th, and 14th Districts, and significantly strengthening Republican control in the 1st, 12th, 15th, and 16th Districts.

1. *National Republicans conceived of the “Franklin County Sinkhole” and presented it to Ohio Republicans as a preferred plan.*

122. Whatman was the first to conceive of the creation of a new district in Franklin County. Whatman Dep., ECF No. 230-52 at 51:17-21 (“Q. And the question would be who came up with this idea, having this new District 3? . . . [A.] It was my -- it was my idea.”).

123. A plan to create a new district in the Columbus area was noted by Republican congressional staffers as early as April 22, 2011. *See* Trial Ex. P382 (April 22, 2011 email to Representative Mike Turner describing discussions among congressional staff about “creating an all-D district in Columbus”). It was also discussed among congressional staffers in June 2011. Trial Ex. P552 (June 1, 2011 email from Representative Steve Stivers’s Communications Director, Courtney Whetstone, in which Whetstone wrote that she was “hearing [about] a redistricting plan that creates a Columbus D district”); Stivers Dep., ECF No. 230-46 at 40:11-41:15 (Rep. Stivers confirmed that his Communications Director sent him this email, which conveys information from Mike Smullen, Representative Bill Johnson’s Chief of Staff).

124. Whatman and Kincaid began drafting the Franklin County Sinkhole proposal no later than July 2011. Kincaid Dep. Vol. II, ECF No. 230-28 at 335:5-21 (“July, August, September, yes, absolutely. During the proposal process I definitely talked to Tom Whatman about the [Franklin County] district.”); *id.* at 378:3-15 (“ . . . I mean, clearly it was something we were looking at as of July 25.”). By the end of July, Kincaid had created a proposal and was scoring it using his preferred metric, PVI. *See* Trial Ex. P313 (changes sheet showing a proposal labeled “As of July 25th,” which included an open district with D+15 PVI scoring in Franklin County); Kincaid Dep., ECF No. 230-27 at 135:23-136:10 (Kincaid testified that he created this changes sheet, and he inferred from the date on the spreadsheet that he created it on or about July 25, 2011); DiRossi Dep., ECF No. 230-12 at 237:9-13 (noting that Kincaid preferred PVI).

125. By September 2011, Kincaid presented the proposal to Ohio Republicans for comment. On September 2, 2011, at 6:41 p.m., Kincaid sent DiRossi and Mann an email with the subject line “New Idea Redraft,” Trial Ex. P119 at LWVOH_00018302; Kincaid Dep., ECF No. 230-27 at 145:6-16 (confirming he sent this email from his NRCC work email account), attaching a spreadsheet labeled “Franklin County Sinkhole,” Trial Ex. P077.

126. In his September 2, 2011 6:41 p.m. email, Kincaid wrote, “Revised attached. Let me know your thoughts and I’ll work on it some more in the morning if needed.” Trial Ex. P119 at LWVOH_00018302. Kincaid attached a compressed file named “NEW MAP IDEA REDRAFT.zip,” *see id.*, which contained a draft map in the form of a block equivalency file. Kincaid Dep., ECF No. 230-27 at 149:17-20.³

127. At 10:09 p.m. that evening, DiRossi responded, “Thanks adam Ill get you some feedback this weekend.” Trial Ex. P119 at LWVOH_00018302.

128. The next morning, at 8:13 a.m. on Saturday, September 3, 2011, Kincaid wrote, “Attached are screen images and a spreadsheet for the block file I sent last night. I’ve re-included the block file here as well.” Trial Ex. P119 at LWVOH_00018302-03. Kincaid attached seven files to that email, *see generally* Trial Ex. P119 at LWVOH_00018303-04; Kincaid Dep., ECF No. 230-27 at 149:17-151:3 (addressing the thumbnails of the attachments listed in Trial Ex. P119): (a) a screenshot of Kincaid’s proposed statewide map, Trial Ex. P327; Kincaid Dep., ECF No. 230-27 at 174:2-8, 174:13-17, 174:23-24, 175:4-5 (Kincaid had no reason to doubt that Trial Ex. P327 was one of the attachments to his September 3, 2011 8:13 a.m. email (the “8:13 a.m. email”) reflected in Trial Ex. P119); (b) four screenshots of various

³ A block equivalency file, also referred to as a block assignment file or simply block file is a file that assigns census geography to congressional districts and can be used in GIS mapping software such as Maptitude. Kincaid Dep., ECF No. 230-27 at 15:15-25.

parts of his new map, *see* Trial Ex. P325; Kincaid Dep., ECF No. 230-27 at 172:3-10 (Kincaid acknowledging the matching filenames of P325 and one of the attachments to the 8:13 a.m. email); Trial Ex. P319; Kincaid Dep., ECF No. 230-27 at 161:22-163:13 (Kincaid had no reason to doubt he sent these screenshots, including P319, and recognized that P319 was one of the districts reflected in his 8:13 a.m. email); Trial Ex. P321; Kincaid Dep., ECF No. 230-27 at 170:2-6, 172:10 (Kincaid testified that P321 “appears to be” one of the attachments to his 8:13 a.m. email); Trial Ex. P323; Kincaid Dep., ECF No. 230-27 at 170:15-23, 171:3-15, 171:21-22 (Kincaid testified that P323 “appears to be” one of the attachments to his 8:13 a.m. email); (c) a compressed file named “NEW MAP IDEA REDRAFT.zip,” which contained a file or files for use in Maptitude, *see* Kincaid Dep. Vol. II, ECF No. 230-28 at 356:18-357:6, 357:8-12 (confirming that the compressed file would have included a block file and/or shape file); and (d) a spreadsheet file named “Ohio Changes – New Idea Redraft.xls,” Trial Ex. P077.⁴

129. At his deposition, Kincaid confirmed three times that he is the author of the spreadsheet named “Ohio Changes – New Idea Redraft.xls” (Trial Ex. P077).⁵ Kincaid Dep., ECF No. 230-27 at 152:14-153:12, 154:10-15; Kincaid Dep. Vol. II, ECF No. 230-28 at 357:19-24, 358:2. Kincaid confirmed that he heard in conversations with Whatman the phrase “Franklin County Sinkhole” used as a description of the new district in Franklin County. Kincaid Dep. Vol. II, ECF No. 230-28 at 370:12-16. He went through every column in the spreadsheet and explained the election data at issue and what it represented. Kincaid Dep., ECF No. 230-27 at

⁴ Trial Ex. P077 is an identical copy of Trial Ex. P316, which was Exhibit 8 at Kincaid’s deposition. *See* Ex. 8 to Kincaid Dep., ECF No. 230-27.

⁵ Trial Ex. P077 was a spreadsheet produced to Plaintiffs by E. Mark Braden, and its parent email, Trial Ex. P119, was provided to Plaintiff League of Women Voters of Ohio via public records requests in 2011. As the email chain shows, two minutes after Kincaid sent his 8:13 a.m. email, Mann forwarded Kincaid’s email to Braden and Bensen, *see* Trial Ex. P119 at LWVOH_00018308, which explains how Braden came into possession of the spreadsheet.

154:3-13, 155:6-10, 158:16-159:14, 159:18-161:16. He also confirmed the Excel formula used to average five of the six elections set forth on the spreadsheet, and which average values are set forth in column W of the excel file. *Id.* at 159:18-161:16; *see also* Trial Ex. P318 (screenshot of native excel spreadsheet revealing formula used to calculate the “Ohio GOP Average”). He further explained the use of the PVI values that also appear (for each district) on similar spreadsheets that he created. *See, e.g.*, Kincaid Dep., ECF No. 230-27 at 218:25-219:12.

2. *National Republican analysis shows that the “Franklin County Sinkhole” ensured a 12-4 map by packing Democrats in the 3rd District and taking Democratic voters out of 12th and 15th Districts.*

130. As he did throughout the redistricting process, Kincaid created a “changes sheet” for the draft Franklin County Sinkhole, which he named “Ohio Changes – New Idea Redraft.” Kincaid Dep. Vol. II, ECF No. 230-28 at 372:19-23, 372:25-373:21. Kincaid used the term “changes sheets” to refer to spreadsheets that display both the political scorings of the 2002 congressional plan and the political scorings of the proposed map at issue. *Id.* at 300:7-18.

131. The “Ohio Changes – New Idea Redraft” spreadsheet, reproduced in part below, is labeled “Franklin County Sinkhole.” Trial Ex. P077.

District	Franklin County Sinkhole															
	McCain		Bush		10 Governor		10 Att. Gen.		06 Att. Gen.		06 Auditor		Ohio GOP Average		PVI	
1 - Chabot	51.25%	6.40%	56.24%	6.08%	55.32%	7.34%	53.19%	6.30%	55.52%	4.77%	59.63%	4.95%	55.59%	5.91%	R+6	7
2 - Schmidt	55.49%	-3.89%	60.93%	-2.97%	56.45%	-3.74%	54.36%	-2.42%	55.50%	-2.85%	59.29%	-2.83%	57.53%	-3.26%	R+10	-3
3 - Turner/Austria	53.13%	1.07%	56.16%	1.30%	54.14%	1.04%	55.29%	0.64%	54.92%	1.44%	56.45%	0.92%	54.96%	1.16%	R+6	1
4 - Jordan	53.22%	-7.83%	58.26%	-7.22%	52.78%	-5.86%	54.57%	-3.45%	50.88%	-4.70%	55.46%	-3.23%	54.12%	-5.77%	R+8	-7
5 - Latta	51.42%	-2.58%	58.72%	-2.58%	51.28%	-1.58%	54.32%	-1.90%	49.90%	-0.37%	58.45%	0.09%	53.96%	-1.40%	R+7	-2
6 - Johnson	53.08%	1.71%	53.74%	2.62%	46.64%	2.91%	49.90%	2.90%	43.05%	3.07%	42.81%	2.37%	47.86%	2.54%	R+5	3
8 - Boehner	57.65%	-3.87%	61.45%	-3.66%	58.84%	-2.34%	59.17%	-2.40%	56.07%	-1.57%	59.49%	-1.87%	58.70%	-2.66%	R+11	-3
9 - Kaptur/Kucinich	32.77%	-3.97%	36.68%	-4.88%	37.43%	-1.28%	36.87%	-3.16%	36.31%	-1.29%	41.19%	-5.36%	36.88%	-3.36%	D+13	-3
11 - Fudge/Sutton	16.95%	2.54%	20.04%	2.52%	21.10%	2.86%	20.68%	2.49%	25.77%	2.03%	25.52%	2.56%	21.88%	2.50%	D+30	2
12 - Tiberi	54.94%	9.97%	61.12%	9.87%	59.23%	8.56%	52.36%	8.24%	57.87%	4.16%	58.90%	5.67%	58.41%	7.65%	R+10	11
14 - LaTourette	49.36%	-0.73%	52.27%	-0.52%	52.84%	-0.24%	49.48%	-0.22%	46.71%	-0.34%	53.14%	-0.41%	50.86%	-0.45%	R+3	0
15 - Stivers	52.61%	7.22%	56.35%	5.89%	52.61%	3.97%	48.03%	6.79%	53.42%	1.04%	53.23%	1.16%	53.64%	3.86%	R+6	7
16 - Renacci	51.56%	0.22%	54.25%	0.22%	54.97%	1.37%	51.44%	0.21%	48.85%	0.59%	54.46%	0.99%	52.82%	0.68%	R+5	1
13 - Ryan	35.90%	-0.86%	37.09%	0.01%	34.74%	-0.31%	32.52%	0.68%	29.95%	1.01%	35.70%	0.65%	34.68%	0.10%	D+12	0
7 - Gibbs	50.70%	-3.33%	54.85%	-2.47%	52.87%	2.03%	50.38%	0.36%	47.75%	-1.41%	52.57%	3.07%	51.75%	-0.42%	R+5	-2
10 - Open	29.46%		35.48%		33.75%		29.30%		39.90%		38.00%		35.32%		D+16	

132. The Franklin County Sinkhole spreadsheet shows the political scoring effects of creating a new district in the Franklin County area. Kincaid Dep., ECF No. 230-27 at 159:2-159:14 (confirming that the data in the spreadsheet represent electoral results for the proposed districts in the Franklin County Sinkhole map).

133. The new Franklin County district is labeled “10 – Open” in the Franklin County Sinkhole spreadsheet, Trial Ex. P077, though it later became labeled the 3rd District in the final map. Kincaid Dep., ECF No. 230-27 at 158:16-159:9, 222:5-6.

134. The new district packed Democrats in Democrat-heavy Franklin County into a single congressional district. *See id.* at 155:6-10, 158:23-159:9; Whatman Dep., ECF No. 230-52 at 52:12-22, 167:7-14; Glassburn Dep., ECF No. 230-14 at 171:16-173:6.

135. As the spreadsheet shows, the newly-proposed district in Franklin County is heavily Democratic with a PVI scoring of D+16. Trial Ex. P077; Kincaid Dep., ECF No. 230-27 at 158:16-159:9.

136. As Kincaid testified, absorbing so many Democrats into a single district bolstered Republican control of the adjacent 12th and 15th Districts:

A. Ohio 15 would have become 7 points more Republican for the same reason Ohio 12 became 9 points more Republican. A new district was created in Franklin County and because of that the other districts no longer contained portions of Columbus as they previously had.

Q. And those were heavily Democratic portions of Columbus; is that right?

A. To the best of my recollection, yes.

Id. at 124:7-15; *see also* Trial Ex. P077, last column labeled “PVI” (the PVI for the 12th District rose by 11 points when compared to the 2002 plan, and the PVI for the 15th District rose by 7 points when compared to the 2002 plan); Kincaid Dep., ECF No. 230-27 at 134:4-14 (“Q. I think

you testified earlier that a reason why the PVI changed for District 12 was a certain number of votes, Democratic votes were put into a new district? A. Correct. Q. And that new district was District 3; is that right? . . . A. Right.”); *id.* at 155:6-10, 222:5-8, 222:11-12.

137. As Dr. Niven testified, Democrats were moved out of the 15th District so that it was transformed from a district where the Democratic candidate won comfortably in 2008, to one that the Republican candidate would have won handily in that same election. Niven, ECF No. 242 at 51:6-21; Trial Ex. P524, Niven Report at 22 (upper table). The transformation of the 12th District was also accomplished by the removal of Democrats. Voters in Franklin County were selectively removed, retained, or added based on their partisanship. The 12th District turned from a slightly Democratic district to a reliably Republican district. Niven, ECF No. 242 at 53:6-54:13; Trial Ex. P524, Niven Report at 25 (upper and lower tables).

3. *To effectuate the “Franklin County Sinkhole,” national Republicans kept “dog meat” voting territory out of the 15th District and placed it in the 3rd District instead.*

138. Braden received a copy of the Franklin County Sinkhole Spreadsheet at 8:15 a.m. on September 3, 2011. *See* Trial Ex. P119 at LWVOH_00018308 (showing that Mann almost immediately forwarded Kincaid’s 8:13 a.m. email to Braden and Clark Bensen).

139. On September 6, 2011, Braden sent Hofeller the “Franklin County Sinkhole” spreadsheet and related files, with a clear statement: “please keep this secret but would like your and Dale’s views.” Trial Ex. P393 at REV_00023176 (email), REV_00023179 (spreadsheet). The RNC’s redistricting counsel at the time was named Dale Oldham. Kincaid Dep., ECF No. 230-27 at 55:8-9.

140. Two days later on September 8, 2011, Hofeller sent a map back to Braden. Trial Ex. P394 at 3 (email chain between Hofeller and Braden). Kincaid has testified that Hofeller’s email address set forth in Trial Ex. P394 was the email address that Kincaid used to

communicate with Hofeller in 2011. Kincaid Dep. Vol. II, ECF No. 230-28 at 322:3-17, 398:2-5.

141. On September 8, 2011, Hofeller wrote, “Mark: Here is the DBF Plan File. I put Hamilton back the way it was except for 5 persons needed to reunite three cities. I gave the plan to Adam as directed.” Trial Ex. P394, email chain between Hofeller and Braden at 3. A DBF file was a block assignment file that can be loaded into Maptitude to generate a congressional district map. Kincaid Dep., ECF No. 230-27 at 214:19-215:13. The map drawers used DBF files to identify the census blocks that were to be contained in a particular district. *Id.* at 15:15-25.

142. Hofeller described his revisions to the map in revealing terms:

The area Adam has on his version included Grandview Heights and some more of the “downtown” area, which I took out of the map I sent – as it was “dog meat” voting territory. I guess then, unless there is some inexplicable reason they want that awful-voting territory in the 15th, the map I sent is OK.

Trial Ex. P394 at 2 (Sept. 8, 2011 3:18 p.m. email from Hofeller to Braden).

143. Hofeller thereby revised the map first proposed by Kincaid by removing “dog meat” voting territory in downtown Columbus from 15th District. *Id.*

144. When confronted with Trial Ex. P394, Kincaid acknowledged in his sworn testimony that “dog meat” and “awful” voting territory means voting territory that “was not friendly area to Republicans.” Kincaid Dep. Vol. II, ECF No. 230-28 at 406:21-22, 406:24-407:3, 407:5-8, 407:10.

4. *By September 10, 2011, the national Republicans reconfirmed the Franklin County Sinkhole architecture.*

145. On September 9, 2011, the day after Hofeller discussed removing “dog meat voting territory” from the 15th District, Kincaid sent an updated version of the Franklin County

Sinkhole proposal to Braden and Whatman, which Braden then forwarded to Hofeller. *See* Trial Ex. P487 (email chain), Kincaid Dep. Vol. II, ECF No. 230-28 at 409:21-410:4 (confirming that Trial Ex. P487 reflects an email he sent to Braden and Whatman on September 9, 2011); Trial Ex. P492 (screenshot of the statewide map that Kincaid attached to his email reflected in Trial Ex. P487), Kincaid Dep. Vol. II, ECF No. 230-28 at 454:20-23 (Kincaid had no reason to doubt that Trial Ex. P492 was an attachment to his email reflected in Trial Ex. P487); Trial Ex. P491 (changes sheet that Kincaid attached to his email reflected in Trial Ex. P487), Kincaid Dep. Vol. II, ECF No. 230-28 at 414:16-22 (confirming that Trial Ex. P491 was an attachment to his email reflected in Trial Ex. P487).

146. At his deposition, Kincaid testified that the spreadsheet he sent to Braden and Whatman on September 9, 2011 (Trial Ex. P491) was “clearly an iteration of” the September 3, 2011 Franklin County Sinkhole proposal. Kincaid Dep. Vol. II, ECF No. 230-28 at 421:3-7; *see also id.* at 421:14-19; *id.* at 414:6-9 (“It [Trial Ex. P491] looks like all the other changes sheets.”).

147. The partisan scores set forth in the September 9, 2011 proposal (Trial Ex. P491) were substantially the same as those in the September 3, 2011 proposal (Trial Ex. P077): in the September 9 iteration, the 11th and 4th Districts were one PVI point weaker for Republicans than in the September 3 iteration, and the 15th District increased by one PVI point. *Compare* Trial Ex. P077, Sept. 3 changes sheet at last Column “PVI,” *with* Trial Ex. P491, Sept. 9 changes sheet at last Column “PVI.”

148. Indeed, Kincaid described the proposal reflected in Trial Ex. P491 as having the same “architecture” as the Franklin County Sinkhole proposal. Kincaid Dep. Vol. II, ECF No. 230-28 at 422:6-8;.

149. Kincaid created at least two more changes sheets, the metadata for which indicates that Kincaid last modified on September 10, 2011 and file named “Ohio Changes - New Plan #1.xls,” and “Ohio Changes - New Plan #2.xls,” Trial Ex. P330, Ohio Changes - New Plan #1; Trial Ex. P331, Ohio Changes - New Plan #2; *see also* Kincaid Dep., ECF No. 230-27 at 194:2-9 (indicating that he created Trial Ex. P330 after he created Trial Ex. P077); *id.* at 195:2-4 (indicating that he believed he created Trial Ex. P331 after he created Trial Ex. P330).

150. The September 10, 2011 changes sheets are substantially similar to the September 3, 2011 Franklin County Sinkhole spreadsheet. *Compare* Trial Ex. P077, *with* Trial Exs. P330, P331. In fact, the PVI scores for all but four districts are identical across these three iterations of the Franklin County Sinkhole proposal: the 2nd and 11th Districts are one point less favorable to Republicans and Democrats, respectively, in the September 10 spreadsheets (Trial Exs. P330 and P331) than in the September 3 Sinkhole spreadsheet (Trial Ex. P077), and the 4th and 5th Districts have different PVI scores in the Trial Ex. P331 spreadsheet (R+11 for the 4th District and R+4 for the 5th District) when compared to PVI scores in the Trial Ex. P330 and Trial Ex. P077 proposals (R+8 for 4th District and R+7 for the 5th District). *Compare* Trial Ex. P331, *with* Trial Exs. P077, P330.

5. *The Franklin County Sinkhole proposal locked in a statewide Republican advantage.*

151. According to Kincaid, “[t]he architecture of [the] new map is one that creates a new Democrat seat in Franklin County.” Kincaid Dep. Vol. II, ECF No. 230-28 at 422:6-8. A review of Kincaid’s PVI scorings for the map, set forth in Trial Ex. P077, demonstrates just why this is the case.

152. The Franklin County Sinkhole spreadsheet shows that the PVI score for the 1st District rose by 7 points to an R+6 district, meaning that the 1st District changed from a

Democratic leaning district under the 2002 plan to a strong Republican district in the Franklin County Sinkhole proposal. *See* Trial Ex. P077 (right column under “PVI” header, displaying the change in PVI from the 2002 plan to the “Franklin County Sinkhole” proposal for each district).

153. As Plaintiffs’ expert Dr. David Niven testified at trial, the increased Republican strength in the 1st District was no accident:

Under the current map, two things stand out [about the 1st District], certainly. One is the -- the very surgical effort to split Hamilton County. As you can see, it’s quite an unusual shape with kind of a -- kind of a reverse Italy shape going on there.

But then, of course, notably, Warren County was added to the district. And what you get then is a Hamilton County where Democrats are the preferred party of most voters and then you bring in Warren county which is overwhelmingly Republican. And what you have the effect of doing here, of course, is negating that -- that Democratic stronghold in Hamilton County with the folks in Warren County.

Niven, ECF No. 242 at 27:15-25. The 1st District as thus drawn in H.B. 319 became R+6, reliably Republican. Niven, ECF No. 242 at 30:10-17; Trial Ex. P524, Niven Report at 7-8.

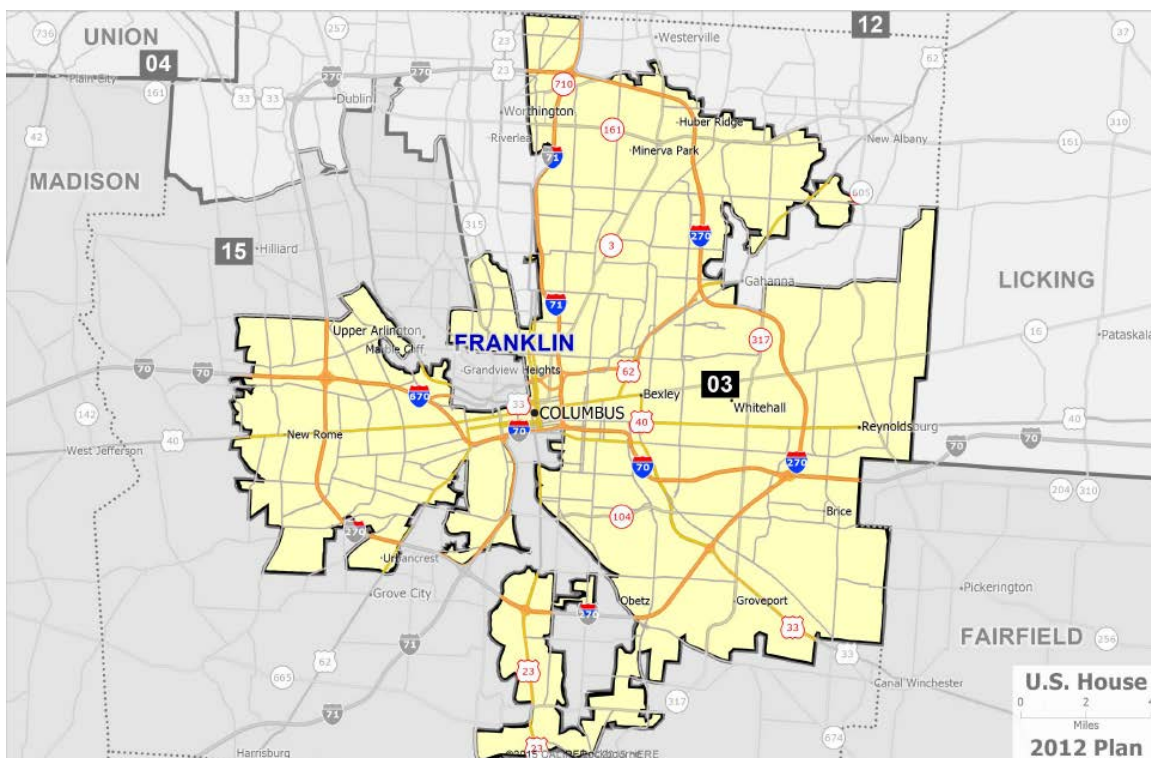
154. The Franklin County Sinkhole spreadsheet also shows that the PVI score for the 16th District was R+5, up one point from the 2002 plan. *See* Trial Ex. P077.

155. The 16th District’s Republican strength remained in the final map, in part because Summit County was divided between the 16th and neighboring 11th Districts (among others): according to Batchelder, then-Chair of the Summit County Republican Party Alex Arshinkoff did not view the incorporation of portions of Summit County into the 11th District “as a loss to him” because the voters included in the 11th District “were mostly black Democrats.” Batchelder Dep., ECF No. 230-3 at 95:2-19. Batchelder presumed that Arshinkoff approved of

this approach “because it helped the other districts in Summit County be more Republican.” *Id.* at 96:21-25; Batchelder, ECF No. 246 at 53:23-54:2.

156. The Franklin County Sinkhole spreadsheet shows that the 2nd, 4th, 5th, 6th, 7th, 8th, 10th, and 14th Districts retained PVI scores that favored Republicans. *See* Trial Ex. P077.

157. The Republican state legislators adopted the national Republicans’ plan to pack Democratic-leaning voters into a district in Franklin County. *See* DiRossi Dep., ECF No. 230-12 at 123:24-124:3 (“There was also the desire among some of the individuals, like Speaker Batchelder, for the first time in the state to create a new district in Franklin County”). The new district is depicted below:



Trial Ex. P454, Cooper Report at 30 (Ex. D-3).

6. *The architecture of the “Sinkhole” informed the enacted maps.*

158. After the General Assembly passed the first congressional map in H.B. 319, Kincaid created a changes sheet that scored each congressional district in the H.B. 319 map using PVI. Trial Ex. P333, Sept. 12, 2011 changes sheet; Kincaid Dep., ECF No. 230-27 at 218:5-8, 218:10-11, 218:15, 219:7-20.

159. Kincaid’s changes sheet for H.B. 319 confirms that the Franklin County Sinkhole strategy devised by national Republicans became the centerpiece of the H.B. 319 map. The PVI scorings of 13 congressional districts in the H.B. 319 map are identical to the PVI scorings of those districts in Kincaid’s Franklin County Sinkhole spreadsheet: the 1st, 3rd, 4th, 5th, 6th, 7th, 8th, 9th, 10th, 12th, 13th, 14th, and 16th Districts. *Compare* Trial Ex. P077, *with* Trial Ex. P333. The PVI scorings of the 11th and 15th Districts in each spreadsheet differ by only one point; in the case of District 15 it was a “R+6” in the “Sinkhole” spreadsheet and “R+7” in the H.B. 319 map. *Id.* The heavily-Republican 2nd District changed by an inconsequential two points. *Id.*

160. After the General Assembly passed the second congressional map in H.B. 369, Kincaid created another changes sheet, which scored each district in the H.B. 369 map using PVI. Trial Ex. P499, Dec. 14, 2011 changes sheet, Kincaid Dep. Vol. II, ECF No. 230-28 at 472:15-473:7, 473:9-474:12; *see also* Trial Ex. P498, Dec. 14, 2011 H.B. 369 Data spreadsheet, Kincaid Dep. Vol. II, ECF No. 230-28 at 467:9-20.

161. Once again, Kincaid’s changes sheet confirms that the national Republicans’ Franklin County Sinkhole strategy formed the foundation of the H.B. 369 map. The PVI scorings for the seven congressional districts in the H.B. 369 map are identical to the PVI scorings for those districts in Kincaid’s Franklin County Sinkhole spreadsheet: the 1st, 6th, 7th, 13th, 14th, 15th, and 16th Districts. *Compare* Trial Ex. P077, Sept. 3 changes sheet, *with* Trial Ex. P499, Dec. 14 changes sheet. The PVI scorings of four congressional districts differ

between the two spreadsheets by only one point: the 2nd, 4th, 5th, and 11th Districts. *Id.* Two other districts designed to pack in Democratic voters—the 3rd and 9th Districts—changed by only two points, and remained heavily packed districts. *Id.* Similarly, the 8th District, which was already heavily Republican in Kincaid’s Franklin County Sinkhole spreadsheet (“R+11”), became three points more Republican under the H.B. 369 map (“R+14”). *Id.* Finally, while the 10th District changed by four points in the H.B. 369 map, it remained a Republican district (“R+2”) under that map. *Id.*

162. The Franklin County Sinkhole architecture devised by national Republicans was preserved in the H.B. 369 map. Under the H.B. 369 map, the 3rd District was scored as a “D+14” district—reflecting, just as in Kincaid’s Franklin County Sinkhole spreadsheet, that the district was heavily packed with Democratic voters. *Compare* Trial Ex. P077, Sept. 3 changes sheet PVI column (“D+16”), *with* Trial Ex. P499, Dec. 14 changes sheet PVI column (“D+14”). At the same time, the 15th District in H.B. 369 was scored as an “R+6” district—the exact same scoring contained in Kincaid’s Franklin County Sinkhole spreadsheet. *Id.* Similarly, as stated in Kincaid’s spreadsheets, the PVI scoring for the 12th District was transformed from a Democratic-leaning district (“D+1”) under the 2002 map to a solidly Republican district (“R+8”) under the H.B. 369 map. Trial Ex. P499, Dec. 14 changes sheet PVI column (“R+8”). This mirrored the Republican transformation of the 12th District, as reflected in Kincaid’s Franklin County Sinkhole spreadsheet. Trial Ex. P077, Sept. 3 changes sheet (in which the new Democratic district was an “R+10”).

G. National Republicans guided the preparation of H.B. 319 and received regular updates on expected partisan outcomes from the Ohio map drawers.

163. In the days leading up to the introduction of H.B. 319, a series of emails were exchanged among national Republicans (including Whatman and Kincaid) and those state

legislators and staff members who were involved in the map drawing process in Ohio (including DiRossi, Mann, Niehaus, and other leaders of the Ohio Senate and House). Trial Exs. P124, P125, P581, P126, P127, P128, and P583 (September 2011 emails between Ohio and national Republicans). In those emails, the national Republicans were asked to approve or disapprove of last minute proposed changes to the map. *Id.* As set forth below, consideration of the effect of any changes on political scorings was central to the consideration of these proposed changes. *Id.* Changes of even less than one percent were run past the national Republicans for their sign off. *See, e.g.,* Trial Ex. P124. The national Republicans did not merely provide instructions. As set forth below, where necessary they seized the pen, redrafted the maps themselves, and made changes that were then adopted by the Ohio map drawers.

1. *The national Republicans were driving to “put a lid” on changes to the map.*

164. On September 10, 2011, DiRossi responded to a concept put forward by Senator Faber in an email to Faber, copying Schuler. Trial Ex. P124; DiRossi, ECF No. 243 at 235:15-237:11; DiRossi Dep., ECF No. 230-12 at 263:8-264:5 (confirming that he recognized the email addresses in Trial Ex. P124). Faber was a member of the Republican leadership of the Ohio Senate in 2011. DiRossi, ECF No. 243 at 235:21-236:7.

165. DiRossi wrote: “Senator Faber - here is your concept put into a map[.] I only traded territory between CD 04 and CD 05[.] If the other idea that Huffman worked on - we need to get something that you and Huffman agree to by tomorrow when Speaker Batchelder and President Niehaus get together.” Trial Ex. P124, Sept. 10, 2011 DiRossi email to Faber and Schuler; DiRossi, ECF No. 243 at 236:8-13. DiRossi drafted the proposed map attached to this email in response to a verbal request from Senator Faber to make granular changes to the 4th and 5th District boundaries in Mercer County. DiRossi Dep., ECF No. 230-12 at 264:10-265:11.

166. DiRossi ended his email with, “DC is increasingly pushing to put the lid on this . . . Jordan is a 52.69 on presidential and Latta is 51.91 on presidential.” Trial Ex. P124, Sept. 10, 2011 DiRossi email to Faber and Schuler (ellipses in original); DiRossi, ECF No. 243 at 239:7-10.

167. By writing that “DC is increasingly pushing to put the lid on this,” DiRossi meant to convey pressure “to get a map proposed and enacted.” DiRossi Dep., ECF No. 230-12 at 266:24-267:3. DiRossi testified at trial that he sent this email “like hours, if not days, before the map was to roll out.” DiRossi, ECF No. 243 at 239:22-23.

2. *Senate President Niehaus was “still committed to ending up with a map that Speaker Boehner fully supports” even if it meant going against the wishes of the Ohio legislative leadership.*

168. The next morning, on September 11, 2011 at 9:25 a.m., Niehaus emailed Whatman and DiRossi with the subject “Redistricting ‘tweaks.’” Trial Ex. P125, Sept. 11, 2011 Niehaus email to Whatman and DiRossi; DiRossi, ECF No. 243 at 240:24-241:3, 242:3-22; DiRossi Dep., ECF No. 230-12 at 268:14-269:3 (confirming that he recognized the email addresses in Trial Ex. P125).

169. President Niehaus wrote:

Sorry about the last minute “tweaks” Faber and Widener.
Part of this process is letting them see how few options you had.

I am still committed to ending up with a map that Speaker Boehner fully supports, with or without votes from two members of leadership.

I spoke with Stivers Sunday morning and know he does not support the Widener change putting him over to Wright Pat.

I am available if we need to talk.

tom

Trial Ex. P125, Sept. 11, 2011 Niehaus email to Whatman and DiRossi (emphasis added); DiRossi, ECF No. 243 at 243:5-17. President Niehaus thereby indicated that he prioritized Speaker Boehner's support for the map above the support from members of his own Senate leadership. *Id.*

3. *Senator Widener's proposed amendments were rejected by Whatman and DiRossi.*

170. DiRossi's reference to the "proposed Widener changes" refers to Senator Widener's efforts "to find a way to unify Clark County." DiRossi, ECF No. 243 at 246:1-7; *see also* Trial. Ex. P581 at LWVOH_00018311 (Sept. 11, 2011 DiRossi email to Whatman and Schuler with the subject "Widener proposal update"); DiRossi, ECF No. 243 at 244:23-245:4.

171. At trial, DiRossi testified that "the president asked me to devote some time to Senator Widener's ideas, to try to get them to see if something would work out" regarding keeping Clark County whole. DiRossi, ECF No. 243 at 246:11-14. DiRossi testified "I told them that I would send it to D.C. to see what they thought. And then I called and said, 'Hey, I'm not even going to do that because this doesn't work.'" DiRossi, ECF No. 243 at 246:15-18.

172. One of the reasons that the map drawers felt that unifying Clark County did not work was because doing so weakened Republican strength in Representative Stivers's 15th District. Trial Ex. P581, Sept. 11, 2011 DiRossi email to Whatman and Schuler at LWVOH_00018311 ("This will push stivers index down"); DiRossi, ECF No. 243 at 247:18-22 ("[Q.] [Y]ou were saying it's not going to work out, this unifying Clark County. At least as of September it wasn't going to work out was because it would push Stivers' index down; isn't that right? A. Well, yeah.").

173. Whatman responded to DiRossi's description of the Widener proposal at 1:44 p.m. the same day, "Thanks. Yea that would be crazy." Trial Ex. P581, Sept. 11, 2011

Whatman email to DiRossi and Schuler at LWVOH_00018311; DiRossi, ECF No. 243 at 248:12-21.

4. *Senator Faber's tweaks were accepted, but only after careful review by Whatman.*

174. Six minutes after Whatman's response to DiRossi's 1:44 p.m. email, Whatman followed up with: "Ray was there some other change you guys wanted to run by me? Got that impression from matts vm a bit ago." Trial Ex. P581, Sept. 11, 2011 second Whatman email to DiRossi and Schuler at LWVOH_00018311; DiRossi, ECF No. 243 at 248:22-249:3.

175. DiRossi responded to Whatman, "yes - I will call you momentarily once I get off phone with Faber." Trial Ex. P581, Sept. 11, 2011 DiRossi email to Whatman at LWVOH_00018312; DiRossi, ECF No. 243 at 249:4-17.

176. The "last minute 'tweaks' from Faber" refer to the adjustments to the 4th and 5th District boundaries in Mercer County that DiRossi noted in his September 10, 2011 email to Faber. *See* Trial Ex. P124, Sept. 10, 2011 DiRossi email to Faber and Schuler; DiRossi Dep., ECF No. 230-12 at 264:6-265:11; *supra* ¶ 165; DiRossi, ECF No. 243 at 237:15-17.

177. The political scorings for the 4th and 5th Districts (located in Northwest Ohio and represented by Representatives Jordan and Latta) that DiRossi included in the email reflected John McCain's 2008 presidential results in the proposed districts. DiRossi, ECF No. 243 at 236:20-23, 237:23-238:6.

178. Late that night, at 1:06 a.m. on September 12, 2011, DiRossi emailed Niehaus, copying Faber and Schuler, with the subject line "Proposed map for LSC." Trial Ex. P126, Sept. 12, 2011 DiRossi email to Niehaus, Faber and Schuler; DiRossi, ECF No. 243 at 251:3-18, 253:6-10; DiRossi Dep., ECF No. 230-12 at 275:2-9 (confirming he sent the email reflected in Trial Ex. P126). DiRossi wrote:

OK - see attached

Work product from tonights efforts

Index for Latta fell two one hundreds of a point to 51.33
Index for Jordan rose three one hundredths of a point to
53.26

Lucas county -

Jordan has 68,911 in Lucas county
Latta has 234,075 in Lucas county

Trial Ex. P126, Sept. 12, 2011 DiRossi email to Niehaus, Faber and Schuler at
LWVOH_00018298; DiRossi, ECF No. 243 at 251:8-18.

179. In this 1:06 a.m. email, DiRossi wanted to make sure that Niehaus, Faber, and Schuler had the political scoring information about the changes he made to the 4th and 5th Districts (represented by Representatives Jordan and Latta). DiRossi, ECF No. 243 at 253:19-22.

180. At 7:44 a.m. on September 12, 2011, Niehaus responded to DiRossi, asking “Did Whatman sign off?” Trial Ex. P126, Sept. 12, 2011 Niehaus email to DiRossi at LWVOH_00018298; DiRossi, ECF No. 243 at 255:13-15.

181. Twelve minutes later, DiRossi wrote, “Whatman signed off.” Trial Ex. P126, Sept. 12, 2011 DiRossi email to Niehaus at LWVOH_00018298; DiRossi, ECF No. 243 at 255:16-19.

182. DiRossi also explained, “It is fair to note that a good part of Lucas [Representative Latta] is picking up is republican territory.” Trial Ex. P126, Sept. 12, 2011 DiRossi email to Niehaus at LWVOH_00018298; DiRossi, ECF No. 243 at 255:24-256:3.

183. DiRossi included the political scorings and noted that Latta “pick[ed] up . . . republican territory,” Trial Ex. P126, at Sept. 12, 2011 DiRossi emails to Niehaus at

LWVOH_00018298, because DiRossi “was just providing [President Niehaus] the information that [DiRossi] thought would be relevant,” DiRossi, ECF No. 243 at 257:15-16.

5. Political scorings drove edits to the 15th District, which were also run past Whatman.

184. At 11:22 a.m., later in the morning on September 12, 2011, DiRossi emailed Whatman with the subject line “Stivers maps.” Trial Ex. P127, Sept. 12, 2011 DiRossi email to Whatman; DiRossi, ECF No. 243 at 258:16-18, DiRossi Dep., ECF No. 230-12 at 281:5-20 (confirming that he recognized the email addresses in Trial Ex. P127).

185. DiRossi attached two image files showing maps, named “Stivers Change full.bmp,” and “Stivers Change zoom.bmp.” Trial Ex. P127, Sept. 12, 2011 DiRossi email to Whatman at LWVOH_00018329.

186. In addition to the attachments, DiRossi wrote:

Stivers 08 Pres goes from 52.64 to 53.31
Stivers unified index goes from 55.02 to 55.72

Schmidt 08 Pres goes from 54.62 to 53.99
Stivers unified index goes from 57.64 to 56.96

I can send equivalency file if necessary

Id.; DiRossi, ECF No. 243 at 257:18-259:15.

187. In 2011, Representative Stivers held the 15th District congressional seat, and Representative Schmidt held the 2nd District seat. DiRossi, ECF No. 243 at 259:8-12, 184:6-13.

188. The 11:22 a.m. email shows DiRossi telling Whatman that certain changes that DiRossi had made would result in the 15th District becoming more Republican. DiRossi, ECF No. 243 at 259:9-15, 260:3-13.

189. At 1:02 p.m. on September 12, 2011, DiRossi emailed Kincaid, copying Mann and Whatman, with the subject line “Ohio final map with possible Stivers addition.” Trial Ex.

P128, Sept. 12, 2011 DiRossi email to Kincaid, Mann and Whatman at LWVOH_00018322; DiRossi, ECF No. 243 at 263:10-15, DiRossi Dep., ECF No. 230-12 at 288:21-289:18 (confirming that he recognized the email addresses in Trial Ex. P128).

190. DiRossi wrote: “We are working to get sign off from Speaker Batchelder and President Niehaus on this Stivers edit and then we will be done.” Trial Ex. P128, Sept. 12, 2011 DiRossi email to Kincaid, Mann and Whatman at LWVOH_00018322.

191. Kincaid responded at 1:30 p.m., “Here’s the changes sheet on it. Good luck!” Trial Ex. P128, Sept. 12, 2011 Kincaid email to DiRossi at LWVOH_00018322. As routinely generated by Mr. Kincaid, “changes sheets” show dozens of data points reflecting political scores, which indicated how the new map at issue compares to the 2002 map on a partisan basis. Kincaid Dep. Vol. II, ECF No. 230-28 at 300:7-18; *see, e.g.*, Trial Ex. P077; Trial Ex. P491; *see also supra* ¶ 130. In particular, the changes sheets showed for each district: the 2004 presidential results; the 2008 presidential results; the 2010 Governor results; the 2010 state Attorney General results; the 2006 Auditor results; the “Ohio GOP Average,” which averaged each of the previous results except for the 2010 Governor results; and the PVI. *See* Kincaid Dep., ECF No. 230-27 at 159:10-14, 159:18-161:16; Trial Ex. P318 (screenshot of native excel spreadsheet revealing formula used to calculate the “Ohio GOP Average”).

6. *The map drawers ran shifts in political scorings of less than 1% past national Republicans.*

192. The political scorings that DiRossi shared with Whatman in the 15th and 2nd Districts each shifted less than one percentage point. Trial Ex. P127, Sept. 12, 2011 DiRossi email to Whatman at LWVOH_00018329; DiRossi, ECF No. 243 at 260:3-13.

193. Even when a political index shifted by less than one point, DiRossi wanted to make sure Whatman was informed. DiRossi, ECF No. 243 at 260:10-13 (“Q. So when a

political index shifted by less than one point, you still wanted to make sure that Mr. Whatman was informed; isn't that right? A. Yeah. Everybody cared about [political scores].").

194. In fact, both members of Congress and Ohio state legislators cared about political scorings, and were among those who inundated DiRossi with questions about political scorings of the new map, even before the map became public. DiRossi, ECF No. 243 at 260:13-261:17, 199:4-10.

7. The national Republicans requested and implemented last-minute changes to the map.

195. Later on the evening of September 12, 2011 at 9:28 p.m., Whatman replied to the thread, "Guys: really really sorry to ask but can we do a small carve out down 77 in Canton and put Timken hq in the 16th. I should have thought about this earlier." Trial Ex. P128, Sept. 12, 2011 Whatman email to DiRossi and Mann at LWVOH_00018323.

196. The Timken Company is a manufacturing company headquartered in Stark County, Ohio. See "Send Us a Message," The Timken Company, <https://www.timken.com/contact-general/> (last visited March 22, 2019) (listing headquarters address as 4500 Mount Pleasant St NW, North Canton, OH 44720). The Timken family is a major donor to Republican candidates in Ohio. Whatman Dep., ECF No. 230-52 at 152:14-153:2. In H.B. 319, Stark County included portions of the 16th District. *Id.* at 154:17-20 ("Q. Well, in fact, didn't Timken headquarters get put in the 16th at the end of the day? A. Yes.").

197. At 9:36 p.m., Kincaid responded to Whatman, "Yeah, sure, no problem. Ray/Heather, do you want me to do it and send the file over, or will y'all do it?" Trial Ex. P128, Sept. 12, 2011 Kincaid email to Whatman, DiRossi and Mann at LWVOH_00018323.

198. DiRossi wrote to Kincaid, "You do and get equivalence file to us asap." Trial Ex. P128, Sept. 12, 2011 DiRossi email to Kincaid, Whatman and Mann at LWVOH_00018323.

199. At 9:41 p.m., Whatman wrote in, “Thanks guys. Very important to someone important to us all. I relly [sic] should have thought of this.” Trial Ex. P128, Sept. 12, 2011 Whatman email to Kincaid, DiRossi and Mann at LWVOH_00018324. The “[v]ery important” person whom Whatman referenced was Tim Timken. Whatman Dep., ECF No. 230-52 at 155:6-9.

200. At 10:42 p.m., Kincaid wrote, “File exporting now. Y’all should have it in 5 minutes.” Trial Ex. P128, Sept. 12, 2011 Kincaid email to DiRossi, Whatman and Mann at LWVOH_00018324.

201. At 10:43 p.m., DiRossi wrote, “Thanks adam.” Trial Ex. P128, Sept. 12, 2011 DiRossi email to Kincaid, Whatman and Mann at LWVOH_00018324.

202. At 10:46 p.m., Kincaid emailed the thread, “Attached are screenshots of the statewide map, the Stark County edit and the .dbf block file. I’ll send the changes spreadsheet in a few minutes.” Trial Ex. P128, Sept. 12, 2011 Kincaid email to Whatman, DiRossi and Mann at LWVOH_00018324. A few minutes later, Kincaid wrote, “Here’s the changes file. Virtually unchanged from before.” Trial Ex. P128, Sept. 12, 2011 Kincaid email to Whatman, DiRossi and Mann at LWVOH_00018325.

203. At 6:41 a.m. the next morning—September 13, 2011, the day H.B. 319 was introduced—Whatman replied, “Thanks all. Stellar work on short notice. Hope i [sic] didn’t mess up making a bill.” Trial Ex. P128, Sept. 13, 2011 Whatman email to Kincaid, DiRossi and Mann at LWVOH_00018325. At 1:30 p.m. on September 13, 2011, Huffman introduced H.B. 319 in the House State Government & Elections Committee. Trial Ex. J26, Sept. 13, 2011 Announcement of Committee Meeting at 001.

H. Through the use of political indices, applied to individual districts in Maptitude, the Republicans confirmed the 12-4 seat division in H.B. 319 and H.B. 369.

1. *The map drawers evaluated proposed districts through the use of several political indices created in collaboration with national Republicans.*

204. Republican map drawers Mann, DiRossi, and Judy were interested in viewing the scorings of proposed congressional districts based on political indices. *See, e.g.*, Trial Ex. P115, chart that DiRossi created scoring maps under political indices; DiRossi Dep., ECF No. 230-12 at 232:11-21; *see also* Blessing Dep., ECF No. 230-5 at 95:7-16; DiRossi Dep., ECF No. 230-12 at 218:4-20; Morgan Dep., ECF No. 230-34 at 56:19-25 (the map drawers “wanted to see election data”); Bensen Dep., ECF No. 230-4 at 30:21-31:6, 31:15-24 (testifying that his clients wanted political data).

205. Batchelder and Niehaus were also interested in viewing index scorings and information regarding the political leanings of proposed districts included in the maps drawn by Mann, DiRossi, and Judy. Blessing Dep., ECF No. 230-5 at 56:9-19, 85:3-10; DiRossi Dep., ECF No. 230-12 at 339:2-16; Judy Dep., ECF No. 230-26 at 43:14-49:5; Schuler Dep., ECF No. 230-43 at 137:18-138:20.

206. Republican map drawers created the Unified Index to assist the map-drawing process and guide decision making. Blessing Dep., ECF No. 230-5 at 75:19-21; DiRossi Dep., ECF No. 230-12 at 111:23-112:7, 112:18-113:20. In particular, the Republican map drawers created and relied on the Unified Index to assess districts in connection with both H.B. 319 and H.B. 369. Blessing Dep., ECF No. 230-5 at 88:10-19, 91:14-17; Trial Ex. J22, Huffman sponsor testimony for H.B. 369 at 002 (in which he noted that the Unified Index “is the index upon which *we chose* to rely”) (emphasis in original).

207. To allow the Republican map drawers to evaluate draft congressional districts using Unified Index scorings, Bensen—who was retained by Braden to assist the map drawing process—included this index in the political data he provided to the map drawers. Trial Ex. P014, Examples of Calculations for Election Averages EA11 to EA16; Bensen Dep., ECF No. 230-4 at 99:3-100:13, 117:16-118:2; *see supra* Section II.B.3. The Unified Index was designated in Maptitude under the race code “EA12_RV.” DiRossi, ECF No. 243 at 280:23-281:10; Blessing Dep., ECF No. 230-5 at 119:6-11, 122:23-25; *see also* Trial Exs. P046-P061, at 4 (reflecting the Unified Index scoring available in Maptitude for each congressional district in H.B. 369), Blessing Dep., ECF No. 230-5 at 131:14-23.

208. In addition to the Unified Index, Republican map drawers also considered an index based on the 2008 presidential election—frequently referred to as “’08 McCain.” DiRossi Dep., ECF No. 230-12 at 236:8-15. The ’08 McCain index reflected a particularly strong Democratic performance statewide and in congressional races. *See* Trial Ex. J15, Official Secretary of State Election Return Data from 2008. The ’08 McCain numbers were included in indices, draft maps, and other Republican work product. *See, e.g.*, Trial Ex. P115, DiRossi chart scoring maps under political indices at DIROSSI_0000010, DiRossi Dep., ECF No. 230-12 at 232:11-233:16, 234:8-12; Trial Ex. P127, Sept. 12, 2011 DiRossi email to Whatman at LWVOH_00018320, DiRossi Dep., ECF No. 230-12 at 280:25-281:24, 283:7-10; Trial Ex. P135, Nov. 15, 2011 spreadsheet at DIROSSI_0000518, DiRossi Dep., ECF No. 230-12 at 324:21-325:9.

209. National Republicans preferred to use PVI to score districts, DiRossi Dep., ECF No. 230-12 at 237:9-13, although they also considered the five elections comprising the Unified Index. *See* Kincaid Dep., ECF No. 230-27 at 159:24-161:13; Trial Ex. P077, Sept. 3 changes

sheet. The PVI metric is used to score congressional districts in the nonpartisan Cook Political Report, which is relied upon by political experts. Brunell, ECF No. 247 at 127:15-25, 128:18-21.

210. Kincaid, in particular, preferred using PVI to score districts. Kincaid Dep., ECF No. 230-27 at 33:19-34:4, 35:16-18; DiRossi Dep., ECF No. 230-12 at 334:6-12.

2. Republican map drawers used Maptitude to assess partisan scorings for proposed districts in real time.

211. The Republican map drawers utilized the redistricting software Maptitude to draw congressional district maps in 2011. Blessing Dep., ECF No. 230-5 at 155:17-156:4; DiRossi Dep., ECF No. 230-12 at 61:13-15; Judy Dep., ECF No. 230-26 at 65:18-23.

212. Maptitude enabled the Republican map drawers to draw congressional district lines at the census-block level. Morgan Dep., ECF No. 230-34 at 33:25-34:10; DiRossi Dep., ECF No. 230-12 at 191:4-9; Blessing Dep., ECF No. 230-5 at 45:16-46:2. Maptitude could also display the political data at both the census-block and congressional-district levels. Blessing Dep., ECF No. 230-5 at 44:18-45:10 (district level), 45:16-46:2 (block level); Morgan Dep., ECF No. 230-34 at 33:21-24 (block level), 35:16-24 (district level); Trial Ex. P018, Bensen Dep., ECF No. 230-4 at 122:12-24 (block level); Trial Exs. P046-P061 (district level).

213. While viewing and editing maps in Maptitude, political index scorings for each district were always on the computer screens. Judy Dep., ECF No. 230-26 at 69:11-25, 104:25-105:8; DiRossi, ECF No. 243 at 200:7-11.

214. When drawing and reviewing maps, DiRossi used two “big” computer screens, one of which displayed “all of [his] data”—including political indices—for each district and the other of which displayed “all the geography” of the map on which he was working. DiRossi,

ECF No. 243 at 200:2-12. Similarly, Judy and Mann viewed proposed changes to draft maps on one another's monitor. Judy Dep., ECF No. 230-26 at 68:6-16.

215. Maptitude calculated political data, including Unified Index and PVI scorings, in real time for each district as it was drawn. *Id.* at 103:24-104:19; Bensen Dep., ECF No. 230-4 at 21:25-22:7 (Maptitude is "basically just a computerized adding machine"); Kincaid Dep. Vol. II, ECF No. 230-28 at 287:6-9, 287:11-19 (testifying that the PVI scores would change in real time as the geographies were changed "[s]o you could immediately see the change in the PVI scoring"). In particular, the Unified Index and PVI scorings for a district changed any time the map drawers made a change to the boundaries of a district. DiRossi Dep., ECF No. 230-12 at 248:4-23, 324:18-325:9; Kincaid Dep. Vol. II, ECF No. 230-28 at 287:6-9, 287:11-22, 287:24.

216. The political data could also be viewed in Maptitude by hovering over a congressional district or in a table. Bensen Dep., ECF No. 230-4 at 145:17-146:4 (testifying that the label tool could be used to display election results); Morgan Dep., ECF No. 230-34 at 44:2-8, 55:14-56:11, 57:6-12 (Morgan trained Mann and DiRossi on how to use the label tool in Maptitude to display political data); *id.* at 117:18-21 (testifying that political data could be viewed in a "Dataview" table in Maptitude); Kincaid Dep. Vol. II, ECF No. 230-28 at 286:18-20, 286:22-287:2, 287:4-5 (PVI scorings in labels); Judy Dep., ECF No. 230-26 at 68:17-25 (testifying he saw "25 plus statistics" in a window in Maptitude while looking at the map being drawn); *id.* at 104:25-105:8 (testifying he saw data in a vertical table in Maptitude); Blessing Dep., ECF No. 230-5 at 42:18-43:16 (testifying she saw data in windows in Maptitude).

217. Maptitude also enabled map drawers to generate color coded maps of a district, allowing them to view the specific political scorings of sub-portions of the district and its relative Republican or Democratic strength. Trial Ex. P589, color coded maps of District 16; Whatman

Dep., ECF No. 230-52 at 180:23-181:9; *see also* Trial Ex. P495 at REV_00023192, Kincaid Dep. Vol. II, ECF No. 230-28 at 440:10-441:14, 441:16-20, 445:9-10, 445:12-19.

218. Maptitude could also be used to generate outputs of data sets—including Excel spreadsheets—for particular districts and maps. Blessing Dep., ECF No. 230-5 at 121:13-14, 121:25-122:9; *see also* Bensen Dep., ECF No. 230-4 at 133:3-23 (explaining that one can export data from Maptitude to an Excel file); Morgan Dep., ECF No. 230-34 at 32:15-22 (explaining that Maptitude has the ability to export election results to an Excel spreadsheet); *see, e.g.*, Trial Ex. P019, data export from Maptitude at BENSEN_0000084, Bensen Dep., ECF No. 230-4 at 132:2-133:12, 134:21-135:23 (example of a data export from Maptitude to Excel that Bensen created).

219. Throughout the map-drawing process, the Ohio map drawers created and used spreadsheets and charts to evaluate the scorings of proposed congressional districts under political indices. *See* Blessing Dep., ECF No. 230-5 at 83:5-10, 84:13-23, 93:10-13 (testifying that she created “a lot of spreadsheets” that contained “indexes”); *see also* Trial Ex. P115, DiRossi chart scoring maps under political indices at DIROSSI_0000010, DiRossi, ECF No. 243 at 274:17-275:4, DiRossi Dep., ECF No. 230-12 at 232:15-21 (chart created by DiRossi in which proposed districts are scored under various indices, including PVI); Trial Ex. P134 at DIROSSI_0000525 (chart created by DiRossi in which Ohio’s proposed congressional districts are scored under both the Unified Index and 2008 presidential index), Trial Ex. P615, Def. Obhof’s Am. Response to Pls.’ First Set of Requests for Admission at 4 (admitting that the metadata in Trial Ex. P134 identifies Ray DiRossi as the last person to modify this document on November 2, 2011), DiRossi Dep., ECF No. 230-12 at 317:17-23; Trial Ex. P135 at DIROSSI_0000518 (chart assessing Ohio’s congressional districts under both the Unified Index

and 2008 presidential index); Trial Ex. P615, Def. Obhof's Am. Response to Pls.' First Set of Requests for Admission at 4 (admitting that the metadata in Trial Ex. P135 identifies Ray DiRossi as the last person to modify this document on November 10, 2011).

3. *Prior to introducing H.B. 319, Republicans knew it would be a 12-4 map based on the political index information.*

220. Using Maptitude, Kincaid created and circulated an analysis comparing H.B. 319 with the 2002 map. *See* Trial Ex. P333, Sept. 12, 2011 changes sheet; Kincaid Dep., ECF No. 230-27 at 216:22-217:4 (confirming Kincaid created the document), *id.* at 219:7-20 (confirming that the document scored H.B. 319). Kincaid analyzed the two maps using PVI scorings as well as the "Ohio GOP Average" based on the five elections in the Unified Index. Kincaid Dep., ECF No. 230-27 at 218:21-219:6.

221. Kincaid's analysis demonstrates clear Republican PVI gains, especially in specific districts: a gain of 7 points in District 1; a gain of 3 points in District 6; a gain of 11 points in District 12; and a gain of 8 points in District 15. *Id.* at 219:21-220:6; *see also* Trial Ex. P333, Sept. 12, 2011 changes sheet.

222. Kincaid's PVI scorings of the districts in H.B. 319 illustrated how the Franklin County Sinkhole strategy resulted in increased Republican strength in Districts 12 and 15. *See* Trial Ex. P333, Sept. 12, 2011 changes sheet; Kincaid Dep., ECF No. 230-27 at 218:5-8, 218:10-11, 218:15, 221:7-10. Under H.B. 369, Districts 12 and 15 "became more Republican" as compared to the pre-redistricting map, Kincaid Dep., ECF No. 230-27 at 222:5-8, 222:11-12, because the map drawers packed Democratic voters into the nearby District 3 centered in Franklin County, *id.* at 222:13-15, 222:19-223:18, 225:16-21, 225:24-226:4, 226:8-13, 226:16-19 ("District 3 has more heavily Democrat parts of Franklin County than the parts that were in [Districts] 12 and 15.").

223. The PVI scorings of each district in H.B. 319 were received by DiRossi from someone he “was talking to at the national level” of the Republican Party—that is, Kincaid—and then incorporated by DiRossi into a spreadsheet. *See* Trial Ex. P115, DiRossi chart scoring maps under political indices; DiRossi, ECF No. 243 at 278:1-5; DiRossi Dep., ECF No. 230-12 at 232:11-21, 238:12-18. The PVI scorings Kincaid sent to DiRossi confirmed that the map drawers built twelve Republican seats—eleven of which had a PVI scoring of R+5 or greater. Trial Ex. P115, DiRossi chart scoring maps under political indices; DiRossi, ECF No. 243 at 278:9-15.

224. Both the national and Ohio map drawers collaborated on analyzing each individual district to support the same goal: the creation of a 12-4 map. Trial Ex. P333, Kincaid Sept. 12, 2011 changes sheet; Kincaid Dep., ECF No. 230-27 at 216:22-217:4; Trial Ex. P115 (DiRossi’s chart incorporating Kincaid’s PVI scorings); DiRossi Dep., ECF No. 230-12 at 232:15-21.

225. Hofeller circulated talking points to colleagues at the RNC—Emily Cornell, Deputy Political Director, and Mike Wild and Daniel Leydord, two staffers working on redistricting—for an Ohio Republican fundraiser on November 15, 2011, that stated: “The proposed map contains 4 Democratic and 12 GOP seats” and “[t]he GOP has also been able to strengthen a number of weak districts.” Trial Ex. P403, Hofeller Nov. 15, 2011 Talking Points at REV_00023517. And immediately upon passage of H.B. 319, an internal RNC Memorandum expressly stated that the Republicans understood that H.B. 319 provided for a “12 to 4 seat advantage” to the GOP.” Trial Ex. P496, Sept. 22, 2011 RNC Memo re: Redistricting Status at 2. *See also* Aff. of Dalton L. Oldham ¶ 5 (affirming that Trial Ex. P496 is a memorandum

drafted by the RNC's counsel's office to Chairman Reince Priebus and Chief of Staff Jeff Larson).

I. Republicans enacted H.B. 319 without meaningful Democratic input or support.

1. Ohio Republicans pushed H.B. 319 through the General Assembly without meaningful Democratic support.

226. In connection with the 2011 redistricting, the Ohio Senate and House of Representatives established committees on redistricting, chaired by Faber and Huffman, respectively. Trial Ex. J30 at SENATE000038 (Email from E. Bittner to L. Obhof dated July 15, 2011 re Senate Select Committee on Redistricting); Huffman Dep., ECF No. 230-19 at 34:10-35:7, 15:10-24. The committees held five public hearings in July and August 2011. *Id.* No maps or indices were considered at these hearings, and the committees had no responsibility for, power over, or communication with map drawers. Trial Ex. J01, Ohio House & Senate Sessions dated September 15, 2011 at 38:2-38:12; Judy Dep., ECF No. 230-26 at 145:18-146:7; Huffman Dep., ECF No. 230-19 at 33:16-34:9; Faber Dep., ECF No. 230-13 at 21:9-24, 27:4-14.

227. On September 13, 2011, Huffman introduced the first congressional map in the House State Government and Elections Committee as H.B. 319. Joint Uncontroverted Facts, ECF No. 212-1 at 3; Trial Ex. J01, Ohio House & Senate Sessions dated September 15, 2011 at 38:2-39:5.

228. H.B. 319 passed the Ohio House of Representatives and Senate only eight days later, after only five days of debate. Joint Uncontroverted Facts, ECF No. 212-1 at 3.

229. Only three Democrats in the House voted for H.B. 319, while only two Senate Democrats voted for the bill. Trial Ex. J07, Ohio House of Representatives Journal Thursday, September 15, 2011 at 12-13, J08, Ohio House of Representatives Journal Wednesday, September 21, 2011 at 15 (Representatives Bill Patmon, John Barnes, Sandra Williams); Trial

Ex. J10, Ohio Senate Journal Wednesday, September 21, 2011 at 535 (Senators Charleta Tavares and Shirley Smith).

230. After convening hearings on September 13 and 14, 2011, the House State Government and Elections Committee voted to refer the bill to the full House by a party-line 14 to 8 vote. Joint Uncontroverted Facts, ECF No. 212-1 at 3.

231. On September 15, 2011, H.B. 319 was debated on the floor of the Ohio House of Representatives. Joint Uncontroverted Facts, ECF No. 212-1 at 3. Explaining the map drawing process, Huffman emphasized that the protection of incumbent members of the Ohio congressional delegation was “subservient” to other redistricting principles relied upon to draw the map. Trial Ex. J01, Ohio House & Senate Sessions dated September 15, 2011 at 18:21-19:2. The House approved H.B. 319 that day by a vote of 56-36. Joint Uncontroverted Facts, ECF No. 212-1 at 3; Trial Ex. J07, Ohio House of Representatives Journal Thursday, September 15, 2011 at 12-13.

232. Following passage of H.B. 319 in the Ohio House, the Senate Committee on Government Oversight and Reform held hearings on the bill on September 20 and 21, 2011. Trial Ex. J28 at 1, 4 (H.B. 318 and H.B. 319 Senate Government Oversight and Reform Committee File).

233. On September 21, 2011, the Senate Committee on Government Oversight and Reform amended H.B. 319 to include a \$2.75 million appropriation that would make the bill immediately effective and thus shield it from a voter referendum. Joint Uncontroverted Facts, ECF No. 212-1 at 3; Trial Ex. J28 at 2 (H.B. 318 and H.B. 319 Senate Government Oversight and Reform Committee File); Trial Ex. J03, Ohio Senate Session Tr. at 30:23-31:3 (Faber—on the Senate floor—stating that “if the appropriation is included in a bill, it becomes effective

immediately and is not subject to referendum”). The amendment was approved on a party line 6-3 vote. Trial Ex. J28 at 3 (H.B. 318 and H.B. 319 Senate Government Oversight and Reform Committee File).

234. The Senate Committee on Government Oversight and Reform voted to approve H.B. 319, as amended, on a party-line 6-3 vote just later than afternoon. Joint Uncontroverted Facts, ECF No. 212-1 at 3; Trial Ex. J28 at 2, 3 (H.B. 318 and H.B. 319 Senate Government Oversight and Reform Committee File).

235. Hours after being referred by the Committee on Government Oversight and Reform, H.B. 319 was passed by the Ohio Senate by a vote of 24-7. Joint Uncontroverted Facts, ECF No. 212-1 at 3. Senate Democrats, including Senators Edna Brown and Nina Turner, argued that the map “lays out 12 Republican districts and four Democratic districts.” Trial Ex. J03, Ohio Senate Session Tr. at 53:19-23; 32:12-33:13; *see also* Turner, ECF No. 240 at 9:15-24, 16:10-16, 17:6-13.

236. Following its passage in the Ohio Senate, H.B. 319 returned to the Ohio House of Representatives on September 21, 2011, and was passed in the House by a vote of 60-35. Joint Uncontroverted Facts, ECF No. 212-1 at 3.

237. Thereafter, H.B. 319 was signed into law by Governor Kasich on September 26, 2011. H.B. 319, 129th Gen. Assembly, Reg. Sess. (Oh. 2011), 2011 Ohio Laws File 53; Joint Uncontroverted Facts, ECF No. 212-1 at 4.

2. *Ohio Republicans did not allow lawmakers any time to debate the merits of H.B. 319.*

238. As proposed by the Republican map drawers, Ohio Republicans held the final congressional map “in the can” until its September 13, 2011 introduction. Trial Ex. P112, 2011

Political Indexes at DIROSSI_0000140; DiRossi Dep., ECF No. 230-12 at 177:16-178:18; Trial Ex. J01, Ohio House Session Tr. at 38:2-39:5.

239. Democratic members of the General Assembly had no input into the content of the map, as there were no negotiations between Democrats and Republicans regarding H.B. 319. Trial Ex. J01, Ohio House Session Tr. at 75:8-18, 23:16-21; Batchelder Dep., ECF No. 230-3 at 57:11-16 (the proposed map was shared with Democratic leadership “right before it was introduced,” but not earlier).

240. Upon the introduction of H.B. 319 in the Ohio House of Representatives, Democratic Minority Leader Armond Budish explained that “the map was drawn by Republicans in secret behind closed doors with no meaningful input whatsoever from members of the public, and now the map is being rammed through the House in just a couple of days in order to prevent any meaningful input from anyone else.” Trial Ex. J01, Ohio House Session Tr. at 67:23-68:4.

241. Other House Democrats complained that only allowing for two days between the map’s introduction and the final vote on H.B. 319 left no time for due consideration of the proposed districts. Trial Ex. J01, Ohio House Session Tr. at 46:12-14 (Representative Tom Letson) (testifying that “[t]his thing is less than 48 hours old”); *id.* at 38:21-39:5 (Representative Ron Gerberry) (testifying that he only received the map two days ago at 2:15 P.M.).

242. Republican members of the General Assembly were also largely kept in the dark about the contents of draft congressional maps until the introduction of H.B. 319. Trial Ex. J01, Ohio House Session Tr. at 38:21-39:5. For example, Faber—who served as the Chairman of the Senate redistricting committee—had little input on the composition of the bill, which he reviewed for the first time only days before its introduction. Faber Dep., ECF No. 230-13 at

57:15-58:8, 174:17-175:17 (“We were given at the last minute a map that we were being asked to support . . . I don’t know what input Speaker Boehner had. I know we didn’t have much”).

J. Even as they considered replacing H.B. 319, Republicans never wavered in their insistence on a 12-4 map.

1. *Ohio citizens initiated a referendum campaign to challenge H.B. 319.*

243. On September 28, 2011, two days after Governor John Kasich signed H.B. 319, a group of Ohio citizens filed a writ of mandamus in the Supreme Court of Ohio seeking an order declaring that H.B. 319 is subject to a citizen referendum, notwithstanding the Republican legislature’s attempt to shield H.B. 319 from a referendum and take immediate effect by attaching an appropriation to the bill. Complaint, *State ex rel. Ohioans for Fair Dists. v. Husted*, No. 2011-1646 (Ohio Sup. Ct. Sept. 28, 2011), ECF 001; *see also* Trial Ex. J03, Ohio Senate Session Tr. at 16:2-17:12 (Faber noting the \$2.75 million appropriation Republican legislators had appended to H.B. 319), 30:23-31:3 (Faber stating that the appropriation would shield H.B. 319 from a referendum and allow the bill to take immediate effect).

244. On October 14, 2011, the Ohio Supreme Court granted petitioners’ writ of mandamus, thereby subjecting H.B. 319 to a possible citizen referendum. *State ex rel. Ohioans for Fair Dists. v. Husted*, 130 Ohio St. 3d 240 (2011).

245. As a result of the Ohio Supreme Court’s decision, opponents of H.B. 319 had 72 days to collect 231,147 signatures to place the referendum on the ballot. *See* McCarthy Dep., ECF No. 230-31 at 162:10-163:10; Trial Ex. P401, Redistricting “Hot Spots” at REV_00023321; *see also* *State ex rel. Ohioans for Fair Dists. v. Husted*, 130 Ohio St. 3d 1408 (2011) (denying a motion that would have extended the signature-collection period).

246. The national Republicans expressed concern that if the citizen referendum were successful, “Ohio could easily end up being 8R-8D.” Trial Ex. P404 at REV_00023469 (Email

from Tom Hofeller to Chris Jankowski, Matt Walter and Lindsay Fisher); *see also* Aff. of Dalton L. Oldham ¶ 5 (affirming that P404 is an email from Hofeller to Chris Jankowski, copying Matt Walter and Lindsay Fisher, on September 20, 2011, with the subject line “OH redistricting” that came from files under the RNC’s control). They remained concerned about a successful referendum through late October. Trial Ex. P401, Redistricting “Hot Spots” at 4-5; Trial Ex. P400 at 4-5 (Email from Tom Hofeller to celticheal@aol.com dated October 17, 2011); *see also* Aff. of Dalton L. Oldham ¶ 3 (affirming that P401 was created on October 21, 2011, and is entitled “Redistricting Hot Spots,” and that Hofeller was known to have created or reviewed similar Redistricting Hot Spot memos, which he shared with the RSLC).

247. In addition to subjecting H.B. 319 to a possible referendum, the Ohio Supreme Court’s ruling prevented H.B. 319 from taking immediate effect. Oh. Const. Art. II, § 1d. Consequently, H.B. 319 was not set to take effect until December 25, 2011—two-and-a-half weeks after the December 7, 2011 candidate filing deadline set by statute for the March 6, 2012 primaries. *See* Rev. Ohio Code § 3513.05 (Ohio primary candidates must file 90 days before the primary election); *see also* Trial Ex. J03, Ohio Senate Session Tr. at 15:14-16:1 (Faber noting the March 6, 2012 primary date and December 7, 2011 candidate filing deadline).

2. *Republicans created a “Split Primary” scheme that would have cost Ohio taxpayers \$15 million and generated voter confusion.*

248. Following the Ohio Supreme Court’s decision, Republican legislators passed H.B. 318, which moved the primaries for U.S. Presidential and House candidates to June 12, 2012, while maintaining the primaries for local, state, and U.S. Senate races on March 6, 2012. Ohio House Journal, p. 1348-49 (Oct. 21, 2011), *available at* <http://archives.legislature.state.oh.us/JournalText129/HJ-10-21-11.pdf>; *see also* Judy, ECF No. 246 at 72:20-73:3 (testifying that after the Ohio Supreme Court’s decision there were two primaries); Trial Ex. J06,

Ohio House Session Tr. at 5:13-20 (Huffman stating on the House floor that passing a new congressional map will “eliminate the second primary, the June 12th primary” created by H.B. 318); Trial Ex. J05, Ohio Senate Session Tr. at 7:13-21 (Senate clerk stating that H.B. 369 would: “eliminate the requirement [in H.B. 318] that Ohio would [conduct] [sic] two primary elections in 2012, . . . [and] establish a single primary election on March 6, 2012 for the purposes of nominating all candidates for election in 2012”).

249. By requiring the state to hold two sets of primary elections only three months apart, H.B. 318 was projected to cost the State of Ohio \$15 million. Trial Ex. J04, Ohio House Session Tr. at 9:23-10:03 (Huffman); *see also* Trial Ex. J22, at 001 (Huffman’s sponsor testimony acknowledging the \$15 million cost of holding two sets of primaries).

250. No Democrats voted for H.B. 318 when it passed in the Ohio Senate on October 20, 2011, or when it passed in the Ohio House of Representatives on October 21, 2011. Trial Ex. J06, Ohio House Session Tr. at 17:05-16 (Rep. Hagan (D)) (“[I]n fact[,] the two primaries were voted against by those of us on this side of the aisle [Democratic].”); *see also* Ohio Senate Journal, p. 1660 (Oct. 20, 2011), *available at* <http://archives.legislature.state.oh.us/JournalText129/SJ-10-20-11.pdf>; Ohio House Journal, p. 1349-50 (Oct. 21, 2011), *available at* <http://archives.legislature.state.oh.us/JournalText129/HJ-10-21-11.pdf>.)

3. *After creating the “Split-Primary” scheme, Republicans refused to consider anything other than a 12-4 map.*

251. Following the passage of H.B. 318, Ohio legislators came under increasing public pressure to avoid the cost and confusion related to holding two primaries in 2012. McCarthy Dep., ECF No. 230-31 at 77:08-11, 121:3-8; *see also* Trial Ex. J06, Ohio House Session Tr. at

34:02-07 (Rep. Lundy); Trial Ex. J05, Ohio Senate Session Tr. at 32:5-33:4 (Senator Cafaro); *see also, e.g.*, Johnson Dep., ECF No. 230-24 at 100:18-101:18.

252. The pressure and uncertainty caused by both the split primaries and the referendum effort pushed legislators to discuss how to unify the primaries. Judy, ECF No. 246 at 82:22-25 (testifying that after H.B. 319 passed, “the confusion . . . chaos and pressure” spurred negotiations); Trial Ex. P568, Email from K. McCarthy to M. Szollosi at SMC-KM-000270 (reflecting Democrats’ desire to act soon, “before even more legal confusion and chaos ensues” and to “avoid the confusing and costly two-primary mess”); McCarthy Dep., ECF No. 230-31 at 77:8-16; DiRossi, ECF No. 243 at 174:7-16. Discussions about potential changes to the congressional map began at this time as well. Trial Ex. P568, Email from K. McCarthy to M. Szollosi at SMC-KM-000271 (describing the Democrats’ efforts to present map alternatives to the Republican majority).

253. Through the map discussions, however, Republicans insisted that any revisions would “not substantively change the 12-4 Republican to Democratic split that existed in HB 319.” Trial Ex. P535, Email from R. Routt to E. Kearney et al. at SMC-RR-016980 (forwarding “Republican draft concept map” on October 28, 2011), Routt Dep., ECF No. 230-41 at 193:5-195:5 (testifying that the Republican draft map did not make any congressional districts more competitive).

254. On November 2, 2011, Democrats offered a proposed map to Republicans that had six potentially competitive districts. Trial Ex. P141, Email from K. McCarthy to C. Glassburn re counter – Draft Presentation at SMC-KM-000412; *see also* Trial Ex. P354 (Compromise Proposal to Draw Fair Congressional Districts).

255. In making this proposal, Ohio Democrats “attempt[ed] to provide a reasonable alternative to the majority” that “does not overwhelming[ly] favor one political party.” McCarthy Dep., ECF No. 230-31 at 90:7-17; *see* Trial Ex. P568, Email from K. McCarthy to M. Szollosi at SMC-KM-000271 (Democratic talking points prepared by McCarthy noting that “the changes [Democrats proposed] simply made 6 of the 12 Republican districts more competitive”); *see also* Trial Ex. 355, Email from S. Bender to K. McCarthy at SMC-KM-000139 (Minority Leader Budish stating that Democrats’ proposal would give “Republicans and Democrats . . . an equal chance of success”).

256. It was the understanding of the Ohio Democrats on or about November 3, 2011 that the Ohio Republican leadership had rejected the Democratic proposal and refused to relent in their demand for a 12-4 map. Trial Ex. J04, Ohio House Session Tr. at 11:7-15 (Minority Leader Budish noting that Republican leadership has “refused” to negotiate with Democrats); Trial Ex. P568, Email from K. McCarthy to M. Szollosi at SMC-KM-000271 (Democratic talking points noting that Republicans rejected Democrats’ November 2 proposal); Trial Ex. P534 (Email from S. Cherry to R. Routt), Routt Dep., ECF No. 230-41 at 188:8-21 (November 3, 2011 email from House Democratic legal counsel to Routt noting that Republicans had rejected all changes proposed by Democrats); Trial Ex. P355, Email from S. Bender to K. McCarthy at SMC-KM-000139 (November 3, 2011 public statement by Minority Leader Budish noting Republicans “rejected a compromise proposal”).

4. *Republicans attempted to push H.B. 369 through the General Assembly, but failed to obtain a supermajority.*

257. On November 3, 2011, House Speaker Pro Tempore Lou Blessing moved to suspend the House and constitutional rules requiring that bills be considered by both Houses on

three separate days so that the House could immediately vote on H.B. 369, a new Republican congressional redistricting map. Trial Ex. J04, Ohio House Session Tr. at 9:4-9.

258. The motion failed to obtain the necessary constitutional majority, as it received no Democratic support. Trial Ex. J04, Ohio House Session Tr. at 9:11-18; Ohio House Journal at 1361-62 (Nov. 3, 2011), *available at* <http://archives.legislature.state.oh.us/JournalText129/HJ-11-03-11.pdf>. In addition to repealing H.B. 319 and imposing a new 12-4 map, H.B. 369 would have reunified the 2012 primaries that were split under H.B. 318. Trial Ex. J04, Ohio House Session Tr. 3:25-4:11 (describing H.B. 369).

259. Following the vote, Minority Leader Budish explained that Democratic leaders “tried to talk to [R]epublican leadership, to negotiate and to compromise, but unfortunately [were] refused. [Republican] Leadership has refused to talk directly with [D]emocratic leadership.” Trial Ex. J04, Ohio House Session Tr. at 11:7-15.

260. As Speaker Batchelder testified at trial, after the close of the November 3 House session, he publicly stated that: “[I]f Democrats [do] not provide the votes to suspend House rules and pass the map as an emergency measure, or do not work out another deal in the near future, the next GOP-drawn map is going to get worse for the minority party.” Batchelder, ECF No. 246 at 62:6-16.

261. The Columbus Dispatch captured Speaker Batchelder at the close of the November 3 session:



BUY PHOTO

HIDE CAPTION

House Speaker William G. Batchelder, R-Medina, put his map up for a vote today and warned earlier that, if Democrats did not provide the votes to suspend House rules and pass the map as an emergency measure, or do not work out another deal in the near future, the next GOP-drawn map is going to get worse for the minority party. - [Shari Lewis | Dispatch](#)

5. The Republicans never relented in their demand for a 12-4 map.

262. Through early November, Democrats sent map proposals to the Republican leadership. McCarthy Dep., ECF No. 230-31 at 147:16-22; Glassburn Dep., ECF No. 230-14 at 99:13-100:4.

263. However, the Republican leadership made clear to Democrats during these discussions that they would not consider a map that included fewer than 12 Republican seats. Glassburn Dep., ECF No. 230-14 at 175:13-23; *see also* Batchelder Dep., ECF No. 230-3 at

130:25-131:5. Republicans only allowed Democrats to “massage things here or there,” while insisting that Democrats “could not touch the allocation of seats, and . . . could not touch certain important features,” including which incumbents would be paired in the final map. Glassburn Dep., ECF No. 230-14 at 204:7-16.

264. On or around November 13, Batchelder assured Representative Renacci that the Ohio Republicans “would hold [his] district intact,” and that “there will be no budging on [his] district.” Trial Ex. P376 (Email exchange between J. Slepian and J. Renacci).

265. The impasse was still in effect as of November 30, 2011. Trial Ex. P356 (Email from K. McCarthy to M. Szollosi).

K. Republicans preserved their 12-4 map through the enactment of H.B. 369.

1. *With total political control, and the collapse of the referendum initiative, Republicans imposed a 12-4 map with token Democratic support.*

266. Ohio Democrats became aware that the proposed referendum challenging H.B. 319 likely would not obtain the requisite number of signatures to be placed on the ballot. McCarthy Dep., ECF No. 230-31 at 163:17-24; Turner, ECF No. 240 at 17:24-18:7. Republicans were also aware that supporters of the referendum were unlikely to meet their goal. McCarthy Dep., ECF No. 230-31 at 164:11-25; Turner, ECF No. 240 at 18:8-14. Democrats lost their ability to extract concessions from Republicans, due to the stalled referendum effort. McCarthy Dep., ECF No. 230-31 at 163:17-164:25. The Republicans fully appreciated that the stalled referendum weakened the Democrats’ bargaining position. Batchelder Dep., ECF No. 230-3 at 121:7-10.

267. By mid-December 2011, Republicans stated that they could pass a map “with very little change” from H.B. 319, and that Democrats would have no choice but to “go[] for what little they can get.” Trial Ex. P398 (Email from Tom Hofeller to Matt Walter et al. re Ohio

Update); Aff. of Dalton L. Oldham ¶ 7; *see also* Trial Ex. P399 (December 14, 2011 email in which Hofeller notes that “it looks unlikely that the Democrats will be able to gather sufficient signatures to delay the implementation of the [H.B. 369] map”). With this in mind, Republicans withdrew any concessions offered following the introduction of H.B. 369 and pressed forward with enacting H.B. 369. McCarthy Dep., ECF No. 230-31 at 165:2-6, 165:16-166:4; Glassburn Dep., ECF No. 230-14 at 186:23-187:17; *see also* Batchelder Dep., ECF No. 230-3 at 170:19-25 (the proposals from the Democrats and Black Caucus were pushed aside).

268. On December 14, 2011, the General Assembly passed an amended version of H.B. 369. Trial Ex. J09, Ohio House of Representatives Journal at 1473-76; Trial Ex. J11, Ohio Senate Journal at 1828-30. The resulting map was virtually identical to the version of H.B. 369 introduced in the House of Representatives on November 3, 2011, which Democrats opposed. Trial Ex. J06, Ohio House Session Tr. at 5:7-10, 10:8-14 (Huffman testifying on the House floor on December 14, 2011, that the amended version of H.B. 369 made only one small change made to the map introduced on November 3, 2011).

269. Contemporaneous spreadsheets available to the Republican map drawers confirm that there were trivial differences between H.B. 369 as introduced and H.B. 369 as enacted. Trial Ex. P042 at col. J (spreadsheet produced by Heather Mann in response to Plaintiffs’ subpoena reflecting trivial differences between H.B. 369 as introduced and “December 14 revision,” which is the final map), Blessing Dep., ECF No. 230-5 at 92:2-12 (testifying “December 14 revision” is the final map); *see also id.* at 91:14-20 (testifying that she generated the index scorings in Column F of Trial Ex. P042 using Maptitude); Trial Ex. P615, Def. Obhof’s Am. Response to Pls.’ First Set of Requests for Admission (admitting that Trial Ex.

P042 was last modified on December 14, 2011, the same day on which H.B. 369 was passed by the General Assembly).

270. The minor alteration made to H.B. 369 prior to its enactment did not alter the competitiveness of any district in the resulting map. Judy, ECF No. 246 at 83:6-17 (testifying that the maps were “substantially similar”); Trial Ex. J06, Ohio House Session Tr. at 5:7-10, 10:8-14 (Huffman stating the change was “minor” and involved only “about 800 people”).

2. Both Republicans and Democrats recognized that H.B. 369 maintained the same 12-4 advantage as H.B. 319.

271. The H.B. 369 map was based upon the map contained in H.B. 319 and drawn in a way that still guaranteed 12 Republican seats and only four Democratic seats. Turner, ECF No. 240 at 22:19-23:7 (Senator Turner testifying that “[j]ust because a few Democrats, for whatever reason, voted for [H.B. 369], did not make it a good map, did not change the fact that voters in the state of Ohio who vote Democrat would have their will suppressed because it was drawn in a way to guarantee 12 Republican seats and only four Democratic seats. . . . The outcome between both of those bills [H.B. 319 and H.B. 369] remained the same”). Judy similarly acknowledged that H.B. 369 was “not that far off from 319.” Judy Dep., ECF No. 230-26 at 178:10-16.

272. On the floor of the General Assembly, prior to the passage of H.B. 369, Democratic legislators noted that the map would entrench a 12-4 advantage for Republicans. For instance:

- Representative Dan Ramos said, on the floor of the Ohio House, “I rise in opposition to what we are about to do today. I do not believe it’s prudent for this body to implement a map that favors either party, 75 to 25 percent in a 50/50 state. A state that elected Governor Ted Strickland and Governor John Kasich, a state that elected President George W. Bush and President Barack Obama.” He continued, “[t]he major Hispanic neighborhood in the City of Cleveland . . . This map splits that neighborhood in two. In neighboring Lorain County, in my district, the major Hispanic neighborhood . . . again, this is split.” Trial Ex. J06, Ohio House Session Tr. at 22:13-20, 26:12-27:4.

- Representative Michael Foley said, on the floor of the Ohio House, “I can’t, in good conscience, support this bill, Mr. Speaker. I can’t, in good conscience, support a map that is essentially still a 12 to 4 map, it’s still essentially based on a map that was created in secret, House Bill 319.” *Id.* at 28:23-29:3.
- Representative Ron Gerberry complained that regular process had not been followed and the map was not voted out of the State Government and Elections, but rather went through the Rules Committee. *Id.* at 36:7-38:8. He said: “so I think the process is wrong , for a lot of reasons.” *Id.* at 37:17-18. He went on to state that: “Speaker John Boehner had more to do with this map than anyone sitting in this room. That’s the truth. That’s wrong.” *Id.* at 37:19-21.
- Senator Nina Turner said, on the floor of the Ohio Senate, “[t]o say that this map is bipartisan is laughable, no matter how many democrats in the House decided to tow the party line and vote for a map that is still 12 to 4.” Trial Ex. J05, Ohio Senate Session Tr. at 23:3-6
- Senator Charleta Tavares said, on the floor of the Ohio Senate, “What this map does is basically cherry-pick [areas to achieve a partisan aim.] . . . Just like the people are not 12/4, they’re more like 50/50. We never believe we were going to get eight democratic districts and eight republican, but it should have been a little more even.” *Id.* at 28:14, 29:12-16.
- Senator Capri Cafaro said, on the floor of the Ohio Senate, “I share the sentiments of my colleagues from Franklin County and [Cuyahoga] County in saying that the map that is presented here may not be an accurate reflection of the political sentiments and will of the people of the state of Ohio.” *Id.* at 31:17-21.

3. *Contemporaneous Republican analyses demonstrated that H.B. 369 met the Republicans’ goal of enacting a 12-4 map.*

273. In his role as Redistricting Coordinator for the NRCC, Kincaid prepared and circulated spreadsheets stating the PVI scorings for each of the districts included in H.B. 369. Kincaid Dep., ECF No. 230-28 at 514:6-12; Trial Ex. P479, Spreadsheet “Ohio Congressional District Data”; Trial Ex. P498, Spreadsheet “New Ohio Map Data.xls”.

274. In particular, Kincaid prepared a spreadsheet named “New Ohio Map Data.xls,” which he shared via email with RNC redistricting staffers Hofeller and Wild on December 14, 2011. Kincaid Dep., ECF No. 230-28 at 467:9-468:19; Trial Ex. 497, Email from Adam Kincaid to Mike Wild re New Ohio Map, Trial Ex. 498, Spreadsheet “New Ohio Map Data.xls.” Kincaid

prepared and sent the spreadsheet because Hofeller and Wild “were running the redistricting shop at the RNC and were interested in how maps performed and what the election results would have been.” Kincaid Dep., ECF No. 230-28 at 468:19-469:4.

275. The spreadsheet indicates that four districts—the 3rd (D+14), 9th (D+15), 11th (D+29), and 13th (D+12) Districts—each had overwhelmingly Democratic PVI scores of at least D+12. Trial Ex. 498, Spreadsheet “New Ohio Map Data.xls”. Each of the 12 remaining districts had Republican-leaning PVI scores of at least R+2, as follows:

District	Kincaid PVI Scoring
1st District	R+6
2nd District	R+9
4th District	R+9
5th District	R+8
6th District	R+5
7th District	R+5
8th District	R+14
10th District	R+2
12th District	R+8
14th District	R+3
15th District	R+6
16th District	R+5

Id.

276. Kincaid also helped to prepare a redistricting PowerPoint presentation celebrating Republicans’ successful efforts to move formerly competitive districts (specifically, the 1st, 12th and 15th Districts in Ohio) “out of play” in future election cycles. Kincaid Dep., ECF No. 230-27 at 115:8-116:25; Trial Ex. P310, NRCC Presentation, “Path to Victory and National Mood” at 5.

277. Of the 1st District, Kincaid explained that the 2011 redistricting process resulted in a “net gain of [seven] points” for the Republicans. Kincaid Dep., ECF No. 230-27 at 120:16-22, 122:13-18, 122:24-123:2, 219:21-23. This shift in favor of the Republican incumbent

resulted from the inclusion of Warren County in the district, as well as the removal of portions of Hamilton County from the district, under H.B. 369. *Id.* at 123:3-5, 123:9, 123:13-15, 123:21-22.

278. Of the 12th District, Kincaid explained that the formerly Democratic-leaning district became “[nine] points more Republican” than it had been in 2010. *Id.* at 117:12-19, 117:23-118:2. This shift in the partisan makeup of the district was due, in part, to the movement of portions of Columbus out of the district. *Id.* at 121:21-122:4.

279. Of the 15th District, Kincaid confirmed that the presentation reported a net gain of seven points in the district’s PVI scoring. *Id.* at 123:23-25, 124:7-9. According to Kincaid, this pro-Republican shift was the result of the consolidation of Democratic voters in the new 3rd District in Franklin County. *Id.* at 124:9-15.

280. The NRCC presentation further identified the 6th District and 16th District as “Competitive R Seats Improved” through the 2011 redistricting process. Trial Ex. P310, NRCC Presentation, “Path to Victory and National Mood” at 6. According to the presentation, each of these districts had a PVI score of R+5, reflecting a three-point shift in favor of the Republican candidate in the 6th District and a one-point shift in favor of the Republican candidate in the 16th district. *Id.*

281. In February 2012, also in his role as Redistricting Coordinator for the NRCC, Kincaid produced a “State-by-State Redistricting Summary” for use in briefing members of Congress and the NRCC. Trial Ex. P414, State-by-State Redistricting Summary; Kincaid Dep., ECF No. 230-28 at 517:23-519:14. For Ohio, the summary indicates that the “new map should be a 12-4 map.” Trial Ex. P414, State-by-State Redistricting Summary; Kincaid Dep., ECF No. 230-28 at 519:3-8. Kincaid also created a PowerPoint slide called “Redistricting Highlights,”

which included the following: “Ohio: Republican map shored up multiple seats for the decade.” Kincaid Dep., ECF No. 230-28 at 512:19-513:5.

282. After Ohio’s redistricting, the “working assumption” at the NRCC was that Districts 1, 15, and 12 had been moved out of play—that is, were no longer competitive. Kincaid Dep., ECF No. 230-28 at 501:7-13.

283. On March 2, 2012, Representative Steve Stivers received a request for comment from the Washington Post regarding the recently completed redistricting process. Trial Ex. P556, Email exchange between S. Stivers, C. Whetstone and A. Kuhn at STIVERS_007520. Consistent with his regular practice, Representative Stivers forwarded the request to his Communications Director, Courtney Whetstone, along with his proposed response in a set of talking points. *Id.* at STIVERS_007519, Stivers Dep., ECF No. 230-46 at 77:22-78:6. The talking points explain that “[t]he redistricting in Ohio did shore up some of the toss-up districts” and describes changes in the PVI scoring for the 1st, 6th, and 15th Districts. Trial Ex. P556 at STIVERS_007519. Representative Stivers acknowledged that PVI refers to the “partisan voting index.” Stivers Dep., ECF No. 230-46 at 79:13-18. Representative Stivers went on to note that “there are a lot more Republicans in my district” as a result of the redistricting, which he testified were “potentially” his “inner thoughts” at the time. Trial Ex. P556, Email exchange between S. Stivers, C. Whetstone and A. Kuhn; *see also* Stivers Dep., ECF No. 230-46 at 80:16-18. Representative Stivers also noted that Representative Chabot “probably won’t have a close race for the next decade” as the PVI in the 1st District went from D+2 to R+10. Trial Ex. P556 at STIVERS_007519.

4. *Democratic analyses confirmed that H.B. 369 is a 12-4 map.*

284. Immediately after the passage of H.B. 369, Democrats in Ohio analyzed the differences between H.B. 319 and H.B. 369. This analysis was performed by Randall Routt, a

Democratic staffer with a hybrid role of policy and IT-related work, and Christopher Glassburn, a former Democratic staffer, and communicated to other Democratic staff. Routt Dep., ECF No. 230-41 at 19:3-12; 200:22-203:17.

285. This district-by-district analysis largely confirmed the parallel analysis conducted by Ohio Republicans. In particular, the Democratic analysis indicated that:

- (1) four districts (the 6th, 11th, 13th, and 14th Districts) saw no change in any partisan scoring between H.B. 319 and H.B. 369;
- (2) two district (the 7th and 16th Districts) saw only negligible change of no more than .20% in any partisan scoring; and
- (3) seven districts (the 1st, 2nd, 4th, 5th, 9th, 12th, and 15th Districts) saw minor partisan scoring changes of less than 1.75% under any partisan scoring.

Trial Ex. P357, Email from R. Routt to G. Boas and A. Hoyt re HB 369/HB 319 Statistical Comparison; Trial Ex. P358, Spreadsheet “HB369HB319Stats.xlsx”; Routt Dep., ECF No. 230-41 at 200:22-203:17; McCarthy Dep., ECF No. 230-31 at 138:15-150:18, 152:3-160:18 (discussing the district-by-district changes reflected in Trial Ex. P358). The three remaining districts (the 3rd, 8th and 10th Districts) reported saw no change in any partisan scoring of more than 4% between H.B. 319 and H.B. 369. *Id.*

286. Notably, these small changes reported by the Democrats were consistent with Republicans’ conclusion that H.B. 369 did not alter the basic partisan leanings of these districts. *Compare* Trial Ex. P498, Spreadsheet “New Ohio Map Data.xls,” *with* Trial Ex. P333, Spreadsheet “Ohio Changes”; Kincaid Dep., ECF No. 230-28 at 467:9-468:18.

287. According to Routt, this analysis confirmed that H.B. 369 represented “tweaks” to H.B. 319, such that H.B. 369 would “essentially be a 12-to-4 Republican map.” Routt Dep., ECF No. 230-41 at 143:17-23, 178:14-19.

288. Like Routt, Glassburn concluded that the 3rd, 9th, 11th, and 13th Districts favored Democratic candidates, while each of the remaining districts favored Republican candidates. Glassburn Dep., ECF No. 230-14 at 184:16-185:8. Glassburn has testified that his contemporaneous district-by-district Maptitude analyses confirm that H.B. 369 was a 12-4 map. *Id.* at 152:11-153:7, 153:15-20, 165:9-166:7 (describing his analysis); 155:12-18, 165:21-166:07 (1st District); 169:20-170:6, 170:11-14, (2nd District); 190:15-191:6, 193:6-13 (4th District); 193:10-194:3 (5th District); 154:10-155:2, 194:9-195:13 (6th District); 195:14-24 (7th District); 196:2-9 (8th District); 196:10-24 (10th District); 199:24-200:24 (12th District); 201:9-24, 202:3-5 (14th District); 202:6-19 (15th District); 188:18-189:14 (16th District); 172:2-3, 172:12-22, 174:5-11, 190:6-14 (3rd District); 196:6-9 (9th District); 198:4-199:6 (11th District); 200:25-201:8 (13th District); Trial Exs. P145-P160, Maptitude screenshots.

289. Consistent with the Routt and McCarthy analyses, Democratic legislators recognized that H.B. 369 essentially guaranteed that the Ohio congressional delegation would be composed of 12 Republicans and four Democrats. Turner, ECF No. 240 at 18:20-22, 23:5-7.

L. Bipartisanship does not explain the 12-4 map.

1. *The Republicans' full control of the legislative process establishes the partisan intent behind the map.*

290. The consensus among political scientists is that when one party has “unified control of government” and “the power to draw the map,” an enacted map can still be a gerrymander even when members of the minority party cast a vote for the map. Warshaw, ECF No. 241 at 112:25-113:5, 113:8-10.

291. Democrats were in the “deep minority” in the Ohio Senate, with only ten members compared to twenty-three Republicans. Turner, ECF No. 240 at 7:12-8:3, 8:22-9:3. No Democratic votes were needed to pass legislation with a supermajority. *See* Ohio Const.

Art. II, § 1d (requiring two-third of all members, or twenty-two Senators, to pass emergency laws).

292. Republicans had a 59-40 advantage in the Ohio House of Representatives, and needed only seven votes to pass legislation with a supermajority. *See* Batchelder, ECF No. 246 at 54:08-12; DiRossi, ECF No. 243 at 181:12-14 (indicating that there were 40 Democrats in the House); Ohio Const. Art. II, § 1d (requiring two-thirds of all members, or sixty-six members of the House, to pass emergency laws).

293. The Ohio Republican leadership could ensure that its members voted together on major items of legislation. *See* Batchelder Dep., ECF No. 230-3 at 90:18-91:6, 92:3-92:8; Niehaus Dep., ECF No. 230-37 at 23:6-10.

294. In the Senate, President Niehaus could prohibit any vote from reaching the floor that he did not have the votes to get approved. Niehaus Dep., ECF No. 230-37 at 23:6-10.

295. In the House, Speaker Batchelder knew that freshman Republican members would defer to him on important votes. Batchelder Dep., ECF No. 230-3 at 90:18-91:6, 92:3-8. Batchelder also convened the House Republican Caucus every Tuesday night and told them how to vote on major items of legislation. *Id.* at 21:3-14. He convened a Tuesday night meeting before the first congressional map was introduced. *Id.* at 91:7-10.

296. H.B. 369 did not receive full bipartisan support as a majority of the Ohio Senate Democrats voted against the bill. Turner, ECF No. 240 at 18:17-19:5 (testifying that the majority of the Ohio Senate Democratic caucus voted against H.B. 369, as it still “guarantee[d] 12 Republican seats and only four Democratic seats”).

297. Moreover, upon passage of H.B. 369, Democratic Members of the Ohio Senate expressed their opposition to the bill, noting that “[t]o say that this map is bipartisan is

laughable” given that the map remained solidly 12-4. Trial Ex. J05, Ohio Senate Session Tr. at 23:3-6 (Senator Turner); *see also id.* at 28:14-23, 29:12-21 (Senator Tavares explaining that the final map “cherry-pick[ed]” Democratic and Republican areas to achieve Republicans’ partisan goals).

298. Even in the Ohio House, where a majority of Democrats did vote for H.B. 369, their support did not reflect a substantively bipartisan result. Recalling the negotiations preceding passage of H.B. 369, Defendant Larry Obhof explained: “While a lot of Democrats voted for the current map, they really didn’t have a lot of negotiating power at that stage, because there was always the opportunity to say hey work with us and we’ll do a slightly better map, or we’ll do what we want and pass it with 51% of the vote.” Trial Ex. P425 (video file).

299. Democratic staffers Glassburn and McCarthy testified that the Republicans “held all the cards” and could ultimately pass their preferred 12-4 map without Democratic support. Glassburn Dep., ECF No. 230-14 at 186:23-187:17; McCarthy Dep., ECF No. 230-31 at 165:23-166:4.

300. Batchelder described the futility of the Democrats’ efforts to defeat H.B. 369 and secure a more competitive map as follows: “Their theory was somehow or another that they could overcome a majority of people who were in the other party, and I don’t know how that would have happened.” Batchelder Dep., ECF No. 230-3 at 115:24-116:3.

2. *The map was not drawn in response to requests from congressional Democrats.*

301. Representative Fudge did not request the inclusion of portions of the City of Akron in Summit County in the 11th District, would not have chosen to include this territory in the 11th District, and was surprised to learn of the change “around the time” that H.B. 319 was made public. Fudge, ECF No. 239 at 83:11-84:12.

302. Regarding the inclusion of portions of Summit County in the 11th District, Representative Fudge testified that she “[c]ertainly . . . would not have chosen it, and [she] was not happy about it.” Fudge, ECF No. 239 at 84:2-9. She later reiterated that she “would not have chosen” for the 11th District to extend beyond Cuyahoga County. *Id.* at 84:11-12. As she explained, at the time, she did not “know anything about Summit County” and “[i]t was just an area that was unfamiliar.” *Id.* at 84:14-23.

303. Describing her discomfort in being forced to represent portions of Summit County, Representative Fudge testified: “I didn’t know any of the elected officials there, I didn’t know the territory, I didn’t know the voters, and so it was uncomfortable to come into a situation where you know no one and have to try to find a way to get elected in a new district.” Fudge, ECF No. 239 at 84:24-85:5.

304. Representative Kaptur “[a]bsolutely [did] not” want to be paired with Representative Kucinich and reacted with “astonishment” upon seeing the newly drawn 9th District for the first time in media reports. Kaptur, ECF No. 249 at 70:12-19; 76:22-23. In particular, Representative Kaptur described the 9th District as being “hacked apart,” with the Republican map drawers “crack[ing] every single county that [she] had ever represented.” *Id.* at 70:20-71:4. Describing the Republican map drawer’s lack of “respect of communities,” Representative Kaptur noted that the proposed map in fact excluded her church and the cemetery where her family maintains a plot from the redrawn 9th District. *Id.* at 72:10-24, 73:13-74:10.

305. Subjecting Representative Kaptur to challenge from Representative Kucinich disregarded Representative Kaptur’s seniority and position on the U.S. House of Representatives Committee on Appropriations. *Id.* at 88:4-15. Despite the pairing, however, Representative Kaptur was able to win reelection “because the voters who were in the districts that [she] had

traditionally represented fiercely” supported her candidacy. *Id.* at 89:7-14. Finally, Representative Kaptur’s position on the U.S. House of Representatives Committee on Appropriations is determined by the Democratic Caucus of the U.S. House of Representatives, and not the Republican Speaker of the House. *Id.* at 87:1-4.

III. The Effects of Republicans’ Redistricting Scheme.

A. The district level evidence demonstrates harm to Plaintiffs First and Fourteenth Amendment rights in each challenged district.

306. As described both on a district-by-district basis below and through statewide evidence, voters in each district suffered discrimination on the basis of party affiliation, dilution of their votes, and harm to their ability to associate for the advancement of their political beliefs. These harms would not have arisen absent the legislature’s intentional partisan discrimination.

1. Congressional District 1

307. Plaintiff Dr. Linda Marcy Goldenhar resides at 420 Wood Avenue, Cincinnati, Ohio 45220. Goldenhar Dep., ECF No. 230-15 at 7:5-10. She has lived and voted in the First Congressional District for over twenty years. *Id.* at 7:5-22; 11:3-6.

308. Dr. Goldenhar has voted in every congressional and presidential election since moving to and registering to vote in Ohio in 1992, and in each of these elections, she voted for a Democratic candidate. *Id.* at 11:24-13:10.

309. Dr. Goldenhar only votes in Democratic primary elections. *Id.* at 12:22-13:6.

310. Dr. Goldenhar testified that her vote has been diluted through cracking Democratic voters in Ohio’s First Congressional District. *Id.* at 37:15-22; 38:4-39:13.

311. She testified that the dilution of her vote was achieved by “all of Warren County [mixing] with half of Hamilton Country,” which split up not only the county but also the city of Cincinnati. *Id.* at 38:15-39:13; *see also id.* at 42:24-43:16 (answering question on how vote is

diluted by the splitting of Hamilton County and the addition of voters from Warren County); *id.* at 58:11-25 (reiterating the dilution of her vote through the splitting of Hamilton County and inclusion of Warren County).

312. Dr. Goldenhar testified that the way the challenged map is drawn burdens her ability to associate and participate in the political process with other Democratic voters in the state of Ohio. *Id.* at 26:13-28:15; 29:5-30:23; 35:22-36:4.

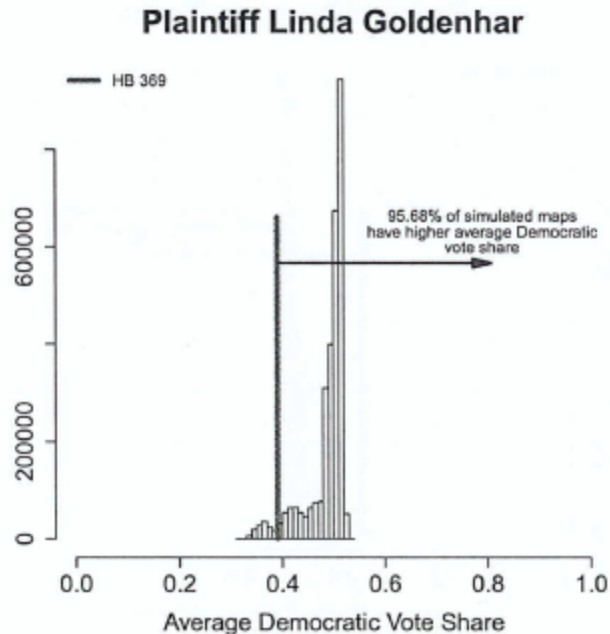
313. Dr. Goldenhar has canvassed and held fundraisers for Democratic candidates. *Id.* at 19:9-21:7.

314. For the 2018 election, Dr. Goldenhar was a part of a group of acquaintances who wrote postcards to Democratic voters encouraging them to get out and vote. *Id.* at 17:4-15; 17:20-24; 18:4-8.

315. Dr. Goldenhar has reached out to her representative, Representative Chabot, multiple times via email and telephone, and has never received a response. *Id.* at 63:6-67:13.

316. Under Plaintiffs' Proposed Remedial Plan, Dr. Goldenhar would live in Proposed Remedial District 1. *Id.* at 7:5-10; Trial Ex. P090, Cooper Decl. ¶ 33.

317. In Dr. Cho's simulated maps, based on 2008 and 2010 data, the minimum, maximum, mean and median Democratic vote share in the districts Dr. Goldenhar would be in are 31.9%, 53.0%, 48.7%, and 50.3% respectively. Trial Ex. P087, Cho Report at 13-29 (illustrated in PD106). 95.68% of Dr. Goldenhar's districts in Dr. Cho's simulated maps would have provided her with a higher likelihood of electing a Democrat. Trial Ex. P087, Cho Report at 13.



318. In Dr. Cho’s simulated maps, based on 2018 data, the minimum, maximum, mean and median Democratic vote share in the districts Dr. Goldenhar would live in are 33.9%, 60.1%, 52.9%, and 55.6% respectively. Trial Ex. P426, Cho Suppl. Report at 7 (illustrated in PD109).

2. Congressional District 2

319. Douglas John Burks lives at 4770 Ashland Avenue, Norwood, Ohio, 45212. Burks, ECF No. 239 at 225:15-16; Burks Dep., ECF No. 230-8 at 7:23-24. He resides in the Second Congressional District. Burks, ECF No. 239 at 225:12-14. He has voted in the district in each and every election since 2012. *Id.* at 225:17-19. In congressional elections, he has always voted for the Democratic candidate. *Id.* at 225:20-22. Brad Wenstrup, the Republican candidate for District 2, won in all of the congressional elections held under the challenged map. *Id.* at 225:23-24.

320. Dr. Burks has lived at his address since 1979, Burks Dep. ECF No. 230-8 at 8:3-5, and in that time, he has been variously in Ohio’s First and Second Congressional Districts, Burks, ECF No. 239 at 227:8-11; *id.* at 237:3-9; Burks Dep., ECF No. 230-8 at 57:21-58:4.

321. Dr. Burks identifies politically with the Democratic party because the party's platform aligns with his values and priorities. *Id.* at 224:20-225:9. He has identified as a Democrat and voted straight Democratic ticket since Ronald Reagan was elected President of the United States. *Id.* at 225:10-11; Burks Dep., ECF No. 230-8 at 19:9-14.

322. Dr. Burks testified that his vote has been diluted through cracking Democratic voters in Ohio's Second Congressional District. Burks, ECF No. 239 at 227:12-229:20.

323. Dr. Burks testified that the dilution of his vote was achieved by an "irregular" district line cutting through Hamilton County that looks as though it was drawn by "a third grader." *Id.* at 227:12-18. Congressional District 2 combines parts of Hamilton County, which is "very Democratic," *id.* at 227:19-22, with "heavily, heavily Republican" counties to its east, *id.* at 228:20-229:1. The district also combines urban areas in Hamilton County with suburban and predominantly rural areas to its east. *Id.* at 228:8-17. "[T]hose who drew the map" "dilute[d] Democratic votes in the very western part" of District 2 and rendered Democratic votes "not as effective." *Id.* at 229:13-20. For elections held under these district lines, it has meant that "another political party other than the Republican party has little chance to win," with odds as low as those of "the Little Sisters of the Poor beating Ohio State Buckeyes in football." *Id.* at 230:1-8.

324. Dr. Burks testified that the way the challenged map is drawn burdens his ability to associate and participate in the political process with other Democratic voters in the state of Ohio. *Id.* at 230:23-235:16.

325. In the 2018 midterm elections, Dr. Burks canvassed as a volunteer for the campaign of Jill Schiller, the Democratic candidate for District 2. *Id.* at 230:23-231:4. He canvassed in Pleasant Ridge, which is a part of Cincinnati. *Id.* at 231:6-10. When canvassing,

Dr. Burks experienced “frustrat[ion]” as he encountered many individuals who were not planning on voting. *Id.* at 231:11-17. Even those who “seem[ed] to support” Schiller declined to even put up yard signs. *Id.* at 231:20-22.

326. Dr. Burks also donated to Schiller’s campaign, which was not well funded. *Id.* at 231:23-232:1. Schiller did not have “strong support at either the national or state level;” the “Democratic party put more money into other campaigns, both in Ohio and nationally for Congress, because they saw [District 2] as a no-win district.” *Id.* at 232:3-6.

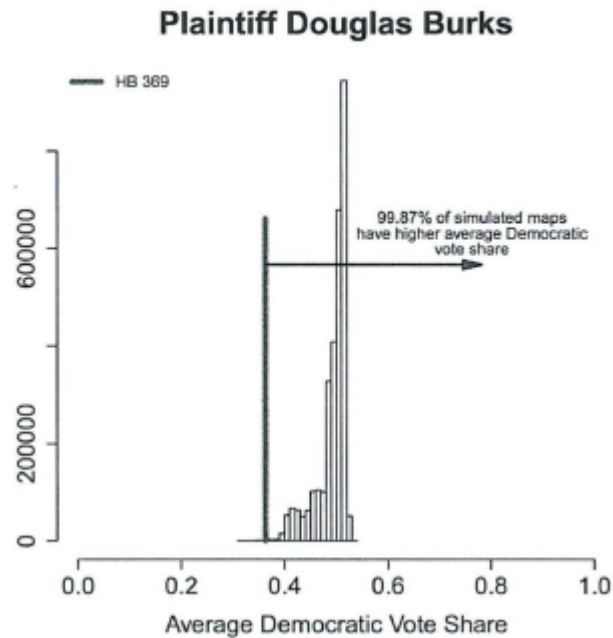
327. Schiller eventually lost the election as winning the district given the dilution of Democratic votes was “extremely difficult.” *Id.* at 232:9-23. She not only had to turn out very Democratic vote in Hamilton County, but also had to receive support in the eastern parts of the district. *Id.* at 232:12-17.

328. Since 2012, Dr. Burks has also engaged in lobbying of congressional representatives in the Cincinnati and North Kentucky region—including Representative Wenstrup, Dr. Burks’s Republican congressional representative. *Id.* at 232:18-233:6. Representative Wenstrup had never co-sponsored or voted for any of the bills that Dr. Burks and his group lobbied for. *Id.* at 233:19-234:2. By contrast, Sherrod Brown, a Democratic senator for the state of Ohio, has co-sponsored and voted for some of the bills that Dr. Burks and his group lobbied for. *Id.* at 234:5-14.

329. Under Plaintiffs’ Proposed Remedial Plan, Dr. Burks would be in Proposed Remedial District 1. *Id.* at 237:3-5; Trial Ex. P090, Cooper Decl. ¶ 33.

330. In Dr. Cho’s simulated maps, based on 2008 and 2010 data, the minimum, maximum, mean and median Democratic vote share in the districts Dr. Burks would be in are 31.6%, 53.0%, 49.2%, and 50.4% respectively. Trial Ex. P087, Cho Report at 13-29 (illustrated

in PD106). 99.87% of Dr. Burks's districts in Dr. Cho's simulated maps would have provided him with a higher likelihood of electing a Democrat. Trial Ex. P087, Cho Report at 14.



331. In Dr. Cho's simulated maps, based on 2018 data, the minimum, maximum, mean and median Democratic vote share in the districts Doug would be in are 33.8%, 60.1%, 54.1%, and 55.6% respectively. Trial Ex. P426, Cho Suppl. Report at 7 (illustrated in PD109).

3. Congressional District 3

332. Plaintiff Sarah Marie Inskeep lives at 83 North Westgate Avenue, Columbus, Ohio, 43204. Inskeep Dep., ECF No. 230-21 at 6:19-22. Ms. Inskeep now lives in the Third Congressional District and has voted in every congressional election since 2012, first in Cincinnati and at her present address since May 2016. *Id.* at 6:19-8:19; 12:5-7; 28:19-29:10.

333. Ms. Inskeep is a Democratic voter and has supported Democratic candidates for Ohio's congressional delegation in the past. *Id.* at 53:23-54:2; 65:20-23.

334. Ms. Inskeep is politically active and has participated in electoral activities in both her personal and professional capacities. *Id.* at 10:13-22; 25:6-7; 53:16-22.

335. During the 2016 election, as part of work at Planned Parenthood, Ms. Inskeep ran “door-to-door canvassing, phone bank operations, [and] direct voter contact operations with volunteers.” *Id.* at 14:6-16.

336. During the 2018 election, as part of her work with the super PAC, Planned Parenthood Voters Ohio, Ms. Inskeep engaged in voter education on reproductive rights issues. *Id.* at 10:13-11:12; 13:3-12.

337. Also during the 2018 election, Ms. Inskeep canvassed every weekend in her personal capacity. *Id.* at 25:2-11.

338. Ms. Inskeep’s vote has been diluted through packing Democratic voters into Ohio’s Third Congressional District. *Id.* at 33:20-22; 51:15-52:5; 71:18-73:10; 78:16-19; 89:14-90:2; 96:24-97:5.

339. Through her electoral activities, Ms. Inskeep has encountered apathetic voters who feel like their vote does not matter as a result of the drawing of the current congressional map. *Id.* at 39:21-40:5; 53:17-22; 54:21-55:6; 58:8-19; 87:21-88:10; 90:8-91:13; 92:11-22.

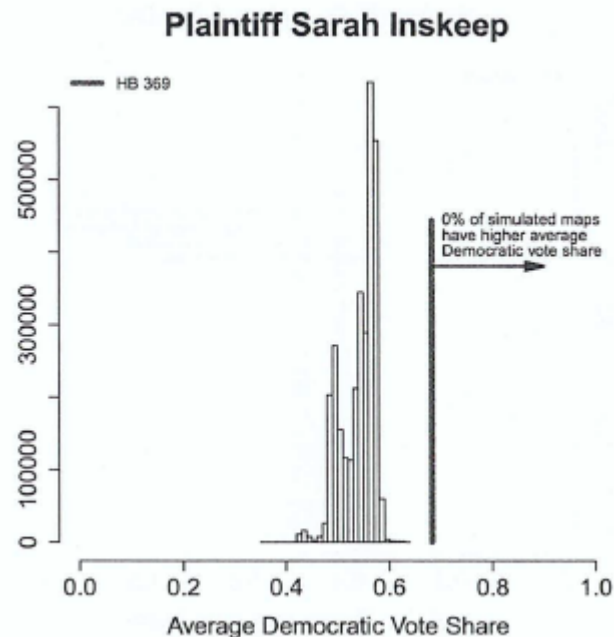
340. Planned Parenthood decided not to invest resources in Ohio’s Third Congressional District because the Democratic candidate was going to win anyway due to the way the district was drawn. *Id.* at 88:17-89:9; 93:17-24; 94:13-21.

341. The current congressional map has caused there to be “less political activity and investment in [Ms. Inskeep’s] district.” *Id.* at 94:17-21.

342. Under Plaintiffs’ Proposed Remedial Plan, Ms. Inskeep would live in Proposed Remedial District 3. *Id.* at 6:19-22; Trial Ex. P090, Cooper Decl. ¶ 33.

343. In Dr. Cho’s simulated maps, based on 2008 and 2010 data, the minimum, maximum, mean and median Democratic vote share in the districts Ms. Inskeep would be in are

35.2%, 63.3%, 54.1%, and 55.1% respectively. Trial Ex. P087, Cho Report at 13-29 (illustrated in PD106). None of Ms. Inskeep's districts in Dr. Cho's simulated maps would have provided her with a higher likelihood of electing a Democrat. Trial Ex. P087, Cho Report at 15.



344. In Dr. Cho's simulated maps, based on 2018 data, the minimum, maximum, mean and median Democratic vote share in the districts Ms. Inskeep would be in are 30.3%, 68.5%, 60.0%, and 60.7% respectively. Trial Ex. P426, Cho Suppl. Report at 7 (illustrated in PD109).

4. *Congressional District 4*

345. Plaintiff Cynthia Libster resides at 342 South Vine Street, Marion, Ohio, 43302, where she has lived for almost 30 years. Libster Dep., ECF No. 230-30 at 9:17-23.

346. Ms. Libster has lived and voted in the Fourth Congressional District for nearly forty years. *Id.* at 10:12-24.

347. She is a consistent voter, including voting in elections for U.S. Congress. "[M]y most important thing I do is vote." *Id.* at 29:21; *see id.* at 50:17-51:12; 54:10-23.

348. Ms. Libster is a “lifelong Democrat,” *id.* at 55:4, and has voted for a Democrat in almost every election she can recall, including always having voted for a Democratic U.S. congressional representative. *Id.* at 46:15-48:19; 50:4-12. She would prefer to live in a Democratic district. *Id.* at 49:17-24.

349. Ms. Libster lives in Ohio’s Fourth Congressional District, where Democratic voters are cracked under the current Ohio map. *Id.* at 10:19-21; 72:17-73:23.

350. As a Democrat, Ms. Libster has both campaigned for and held office herself, and has been involved in canvassing and GOTV efforts for presidential and local elections for almost 30 years. *Id.* at 54:24-55:4; 82:7-12.

351. Through her canvassing and fundraising efforts and by talking to her neighbors, she has experienced how the Fourth District’s design and the congressional map as a whole contribute to voter apathy in her community. *Id.* at 60:9-24; 62:9-63:7.

352. She has attempted to fundraise for Democratic candidates including Fourth District Congressional candidate Janet Garrett, but cannot amass support because of the voter apathy caused by the map. Ms. Libster testified that voters are discouraged because Garrett loses by “a thirty percent whapping all the time. It’s never ever – my vote – when I go in there to vote for Janet Garrett as a Democrat, it’s never going to happen. Snowball’s chance.” *Id.* at 39:16-20; *see id.* at 75:13-25; 76:9-19.

353. From her experience educating voters and talking to her neighbors, Ms. Libster is also aware of the voter confusion caused by the gerrymandered map. For instance, she has “friends . . . who live three miles away who are in the 12th District and didn’t even realize they were in the 12th district until we talked about it.” *Id.* at 21:19-22.

354. Ms. Libster feels that her representative, Jim Jordan, does not represent her interests as a voter because his district is so safe that he does not need to. “He doesn’t care about my vote. He doesn’t care about my vote. He doesn’t care about representing me.” *Id.* at 37:3-5.

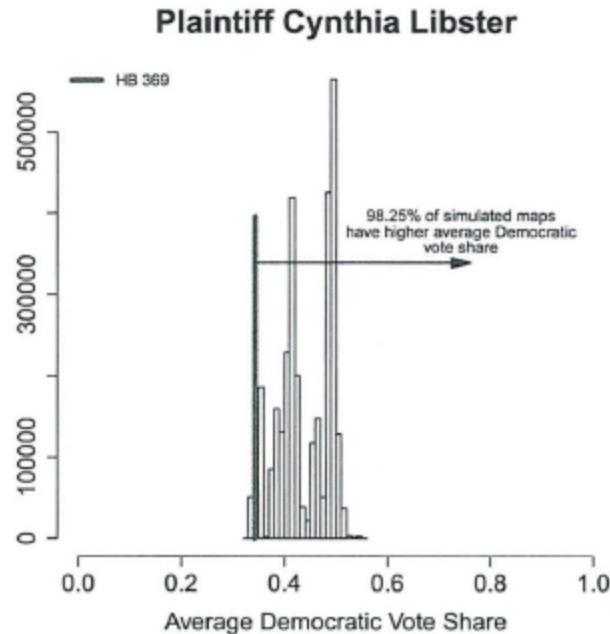
355. She feels the 2012 map makes her district so safe for Representative Jordan that she and other Democratic voters like her feel their votes have no power. *Id.* at 29:4-12; 52:4-15 (“I want my vote to matter. I don’t want to be disenfranchised as a voter. I don’t want to feel like every time I go vote for the Democrat they’re going to get pounded by thirty, forty percent.”).

356. Despite calling and emailing his office to express her concerns over his policy positions, Ms. Libster has never spoken to or seen Jim Jordan—for example, she is aware of a League of Women Voters bipartisan candidate forum that happened in her community that he did not attend despite an invitation. *Id.* at 30:9-36:9.

357. Her district covers so many communities and so much geographic space that she feels her representative could not effectively represent her even if he felt compelled to. She testified, “I mean, how do I go to my representative when he’s clear down in Urbana? If I live in Oberlin, how does that happen? That’s a long drive.” *Id.* at 23:13-16.

358. Under Plaintiffs’ Proposed Remedial Plan, Ms. Libster would live in Proposed Remedial District 4. *Id.* at 9:17-23; Trial Ex. P090, Cooper Decl. ¶ 33.

359. In Dr. Cho’s simulated maps, based on 2008 and 2010 data, the minimum, maximum, mean and median Democratic vote share in the districts Ms. Libster would be in are 32.9%, 55.8%, 44.1%, and 43.5% respectively. Trial Ex. P087, Cho Report at 13-29 (illustrated in PD106). 98.25% of Ms. Libster’s districts in Dr. Cho’s simulated maps would have provided her with a higher likelihood of electing a Democrat. Trial Ex. P087, Cho Report at 16.



360. In Dr. Cho’s simulated maps, based on 2018 data, the minimum, maximum, mean and median Democratic vote share in the districts Ms. Libster would be in are 27.3%, 63.2%, 41.4%, and 38.1% respectively. Trial Ex. P426, Cho Suppl. Report at 7 (illustrated in PD109).

5. Congressional District 5

361. Plaintiff Kathy Deitsch lives at 8093 Hellwarth Road, Celina, Ohio, 45822. Deitsch Dep., ECF No. 230-11 at 10:21-23. She lives in Ohio’s Fifth Congressional District, where Democratic voters are cracked under the current map. *Id.* 14:3-5.

362. Ms. Deitsch has always identified as a Democrat since she was “first able to vote,” and has voted for a Democrat in almost every election she can recall, including always having voted for a Democratic U.S. congressional representative. *Id.* at 19:14-20.

363. Ms. Deitsch has been involved in Democratic organizing for many years, has campaigned for office herself, and regularly works to get out the vote, fundraise, and support other Democratic candidates. *E.g., id.* at 21:20-22:14; 24:25-25:22; 30:5-16; 30:22-32:4. She

has also canvassed to put partisan gerrymandering reform on the Ohio ballot in 2017 and educate voters about gerrymandering. *E.g., id.* at 39:10-40:24; 41:5-42:7; 42:18-43:10.

364. Ms. Deitsch's experience from canvassing, being involved in politics, and talking to her neighbors is that because the gerrymandered map makes elections a foregone conclusion, voters feel their votes do not matter. "[Y]ou would go and knock on the door and somebody would say to you it doesn't make any difference who I vote for, they're not going to win or I'm not going to give you money because they're not going to win." *Id.* at 48:8-13; *see id.* at 85:25-86:8; 90:4-12.

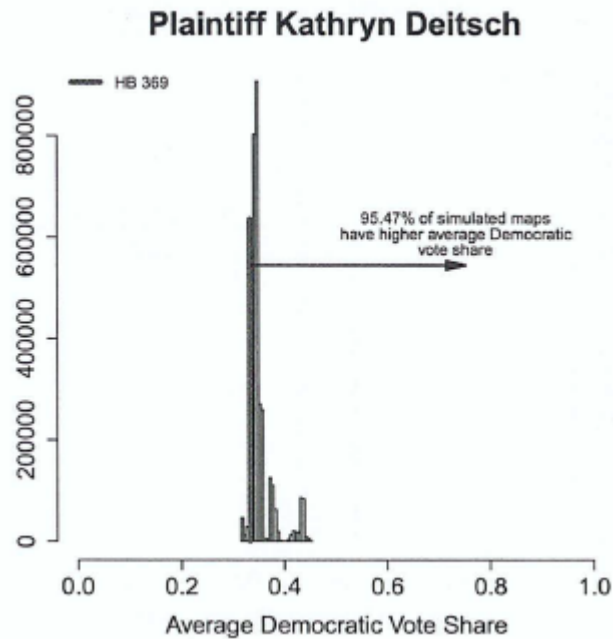
365. Based on the same experience, Ms. Deitsch knows that because the 2012 Map splits her "small county" between "three different [congress]people," voters in her community are often confused about which congressional district they are in. This contributes to their disengagement from the political process. *Id.* at 53:10-19; 54:17-55:15.

366. Ms. Deitsch feels that, like other Democratic voters in her district, her own vote does not matter. She feels that Bob Latta does not represent her interests as a voter because his district is so safe, he does not need to. For example, despite inviting Latta to events, and trying many times to contact his office personally, he has never responded to her or her neighbors. *Id.* at 56:4-23; 57:12-59:3; 78:21-79:6; 96:2-97:23.

367. Under Plaintiffs' Proposed Remedial Plan, Ms. Deitsch would live in the Proposed Remedial District 4. *Id.* at 10:21-23; Trial Ex. P090, Cooper Decl. ¶ 33.

368. In Dr. Cho's simulated maps, based on 2008 and 2010 data, the minimum, maximum, mean and median Democratic vote share in the districts Ms. Deitsch would be in are 31.6%, 45.3%, 35.6%, and 34.7% respectively. Trial Ex. P087, Cho Report at 13-29 (illustrated

in PD106). 98.25% of Ms. Deitsch's districts in Dr. Cho's simulated maps would have provided her with a higher likelihood of electing a Democrat. Trial Ex. P087, Cho Report at 17.



369. In Dr. Cho's simulated maps, based on 2018 data, the minimum, maximum, mean and median Democratic vote share in the districts Ms. Deitsch would be in are 26.1%, 50.4%, 31.9%, and 30.5% respectively. Trial Ex. P426, Cho Suppl. Report at 7 (illustrated in PD109).

6. Congressional District 6

370. Plaintiff LuAnn Boothe lives at 798 Township Road 15, Rayland, Ohio, 43943, where she has resided for 34 years. Boothe Dep., ECF No. 230-6 at 7:25-8:9.

371. Ms. Boothe lives in Ohio's Sixth Congressional District where Democratic voters are cracked under the current map. *Id.* at 8:3-20.

372. She is an active voter, having voted in every election she can recall, including elections for U.S. Congress. She identifies as a Democrat, and has voted for a Democrat in almost every election she can recall, including always having voted for a Democratic U.S. congressional representative. *Id.* at 21:8-10; 49:8-24; 90:16-17.

373. Ms. Boothe has been involved in Democratic politics beyond voting, including canvassing in support of the Clinton campaign, since 2012. *Id.* at 16:7-18; 66:18-25; 67:15-19.

374. Through canvassing and talking to her friends and neighbors, she has heard that Democratic voters in her area “feel that their vote is monopoly money” and “said it didn’t count.” *Id.* at 26:11-15; *see id.* at 52:19-23. This kind of apathy has made it more difficult for her to successfully organize with the Democratic Party. *Id.* at 88:4-15.

375. In Ms. Boothe’s experience, Representative Johnson is not responsive to her or her fellow Democrats in the Sixth District. *Id.* at 41:20-42:4. For example, she has not seen or heard back from Representative Johnson despite trying to call him. *Id.*; *see also id.* at 91:2-9; 91:11-16.

376. In Ms. Boothe’s experience, “[n]obody comes to the district. It’s so [R]epublican that they don’t have to. The [R]epublicans don’t have to come because they are going to win anyhow. And nobody that’s [D]emocrat wants to run in that area, because you’re going to spend a lot of money and lose anyhow.” *Id.* at 20:16-21.

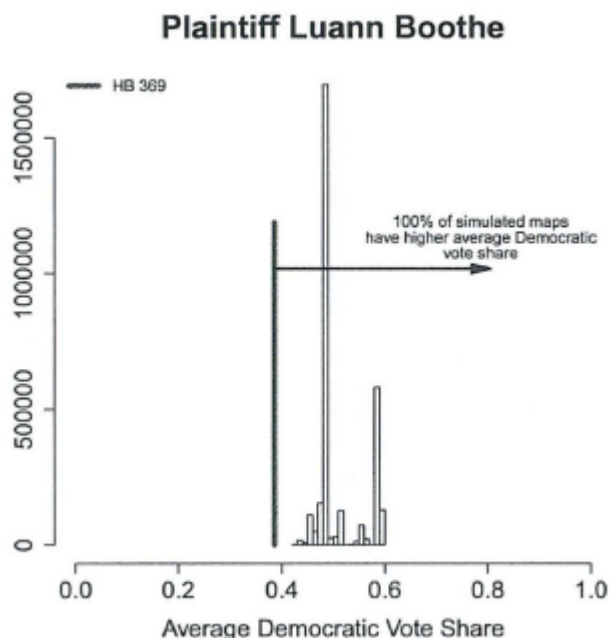
377. The geographic spread of Ms. Boothe’s district exacerbates these problems. *Id.* at 51:5-16.

378. She feels that Representative Johnson does not represent her interests as a voter because his district is so safe, that he believes he does not need to. For example, in the last election, she did not see him campaign anywhere near her, and she believes his opponent had no chance to win. *Id.* at 39:19-40:3; 46:23-47:2; 48:11-18.

379. Ms. Boothe feels that as a result of the gerrymandered map, in her district, “my vote is like monopoly money; you can cast it, but you can’t buy anything for it, because it’s too weak.” *Id.* at 51:2-4; 53:9-13.

380. Under Plaintiffs' Proposed Remedial Plan, Ms. Boothe would live in Proposed Remedial District 6. *Id.* at 7:25-8:9; Trial Ex. P090, Cooper Decl. ¶ 33.

381. In Dr. Cho's simulated maps, based on 2008 and 2010 data, the minimum, maximum, mean and median Democratic vote share in the districts Ms. Boothe would be in are 42.7%, 59.4%, 51.0%, and 48.3% respectively. Trial Ex. P087, Cho Report at 13-29 (illustrated in PD106). All of Ms. Boothe's districts in Dr. Cho's simulated maps would have provided her with a higher likelihood of electing a Democrat. Trial Ex. P087, Cho Report at 18.



382. In Dr. Cho's simulated maps, based on 2018 data, the minimum, maximum, mean and median Democratic vote share in the districts Ms. Boothe would be in are 35.4%, 49.7%, 41.6%, and 39.3% respectively. Trial Ex. P426, Cho Suppl. Report at 7 (illustrated in PD109).

7. Congressional District 7

383. Mark Griffiths has lived at 33137 Hawks Nest Court in North Ridgeville, Ohio for almost 16 years. Griffiths, ECF No. 240 at 40:6-8. His home is currently in Congressional District 7, where Democratic voters are cracked under the 2012 map. *Id.*

384. Mr. Griffiths, a registered Democrat, is represented by U.S. Representative Bob Gibbs, a Republican. *Id.* at 40:18-25.

385. Mr. Griffiths has resided in the same area all of his life—in Lorain and Cuyahoga Counties, in the “west, southwestern part of Cleveland.” *Id.* at 40:9-17.

386. He first registered to vote in Ohio in 1970, and votes “always, whenever [he] can” because he “think[s] voting is very important. [He] think[s] we need to participate in the democracy, and [he] take[s] that responsibility very seriously.” *Id.* at 41:7-14.

387. Mr. Griffiths has been a Democrat his “whole life,” *id.* at 41:15-17, because “Democratic [P]arty values align with” his, *id.* at 41:18-23. Democratic Party issues that he cares about include “access to affordable healthcare, fair treatment of people, [and] equal opportunity for people.” *Id.*

388. He has only ever voted for a Democrat for United States Congress. *Id.* at 42:3-5. This includes having voted for a Democrat for Congress in every election since the 2012 map has been operative—except for in 2014, when Representative Gibbs ran as an unopposed Republican in District 7. *Id.* at 47:6-48:3.

389. Mr. Griffiths is “involved in a number of political activist organizations” with which he works on Democratic and voter engagement issues. *Id.* at 42:6-14. These include the groups Lorain County Rising, Indivisible Wellington, the Oberlin chapter of the League of Women Voters of Ohio, and the North Ridgeville Democratic Club. *Id.*

390. With Lorain County Rising and the League of Women Voters, Mr. Griffiths has participated in voter registration and education efforts, and in petition efforts to reform partisan gerrymandering in Ohio. *Id.* at 42:15-44:2.

391. These groups are both located in Oberlin, Ohio. *Id.* This is near to Mr. Griffiths's North Ridgeville home, but is in Congressional District 4. *Id.*

392. Mr. Griffiths does similar work in Congressional District 7 with Indivisible Wellington. *Id.* at 44:3-10. With this group, he has worked in District 7 “on the antigerrymandering effort” that became Ballot Issue 1, and “to encourage the state to adopt automatic voter registration.” *Id.*

393. This group also works to support Democratic Party issues including Democratic Congressional candidates. *Id.* at 44:14-23. Mr. Griffiths worked with Indivisible Wellington to elect Democrat Ken Harbaugh to replace Bob Gibbs in Congress in 2018. *Id.*

394. With the Harbaugh campaign, Mr. Griffiths “did door-to-door canvassing for him,” “phone banking,” “a Get Out the Vote effort with postcards,” and “sponsored some meet-and-greet sessions so that he could get to meet voters.” *Id.* at 44:24-45:4.

395. All of these efforts were in current District 7 towns, including North Ridgeville, Avon, and Wellington. *Id.* at 45:5-11.

396. Mr. Griffiths has also worked to revive his local Democratic Party group, the North Ridgeville Democratic Club. *Id.* at 45:12-22.

397. This effort, a “long, slow process,” *id.*, also revolved in part around the 2018 Democratic effort to elect Ken Harbaugh in District 7, *id.* at 45:25-46:9.

398. As a Democratic District 7 voter, Mr. Griffiths believes that his congressperson is not responsive to him, and does not represent him. *Id.* at 48:19-51:1. His experience in District 7 has led him to believe that Representative Gibbs is “not someone that was representing [his] community.” *Id.*

399. Mr. Griffiths has tried to “contact[] Congressman Gibbs . . . at least ten or 15 times – either e-mail, phone calls, letters.” *Id.* at 53:25-54:7. In the instances when he has reached someone at Representative Gibbs’s staff, he has “never heard anything back.” *Id.*

400. With his political advocacy group, Indivisible, he has met with Representative Gibbs twice to attempt to discuss Gibbs’s opposition to the Affordable Care Act. *Id.* at 48:19-51:8.

401. At one of these meetings, Mr. Gibbs acknowledged that Mr. Griffiths “actually had to pay a toll to come to this meeting,” because his office was so far from Mr. Griffiths’s home. *Id.* at 49:2-8. There are “five different congressional representatives with offices closer to [Mr. Griffiths’s] home than either of the two offices of Bob Gibbs.” *Id.* at 49:9-18.

402. From these two meetings, Mr. Griffiths got “the message that [his view] really did not matter” to Representative Gibbs “because of the shape of the makeup of the district . . . the more northern part of the district that [Mr. Griffiths is] in, Avon, North Ridgeville, which may have more Democrats, really are not anything that [Representative Gibbs] needs to be concerned about.” *Id.* at 50:7-51:8.

403. Mr. Griffiths is not aware of any instance in which Representative Gibbs came to his home town, besides non-public, invite-only meetings. *Id.* at 54:8-20.

404. Mr. Griffiths’s neighbors in North Ridgeville expressed “shock[]” that Mr. Griffiths met with Representative Gibbs at all, because in North Ridgeville, “he’s often referred to as a ghost because no one ever sees him.” *Id.*

405. According to Mr. Griffiths, “I don’t feel as though I’m being represented. I think the representative either doesn’t care about my views or doesn’t need to care about my views.” *Id.* at 53:22-24.

406. As an Ohio Democrat, Mr. Griffiths has faced challenges supporting Democratic campaigns including for U.S. Congress because of voter confusion and apathy. *Id.* at 51:9-53:19.

407. In trying to register students to vote at Lorain Community College, Mr. Griffiths had difficulty because “[p]eople did not understand what district they were in . . . it was amazing . . . how people did not know or understand which district they were in.” *Id.* at 52:18-53:10.

408. In his canvassing and voter engagement efforts, and in trying to revive his local Democratic club, Mr. Griffiths saw that people “were not interested in voting. They did not think that things would change. They did not understand what would be the point . . . they really did not think that they were going to bother voting because what’s the use?” *Id.* at 52:5-13; *see also id.* at 53:11-19.

409. In the losing 2018 congressional campaign for Ken Harbaugh, “[e]ven with all the work and the time and the effort that [Mr. Griffiths and other Democrats] put into it, [they] were not able to overcome the makeup and the math of the map as it exists in District 7.” *Id.* at 51:13-25.

410. Before the 2012 map was enacted, Mr. Griffiths’s congressional “district was different.” *Id.* at 48:4-7. His home had been in a predominantly Democratic district for many years; he was represented in Congress by Democrat “Betty Sutton, and prior to Betty Sutton was [Democrat] Sherrod Brown in that same district.” *Id.*

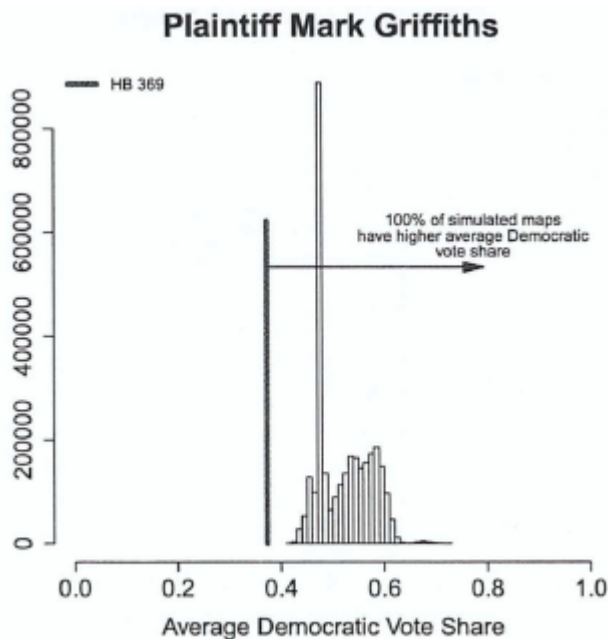
411. Mr. Griffiths discovered that his district had changed on Election Day. *Id.* at 48:8-18. “[G]oing into the 2012 election, [he] really expected to be voting between [Democratic incumbents] Marcy Kaptur and Dennis Kucinich. It was not really until the election that [he]

realized that . . . [his district] had been included and put into Bob Gibbs’[s] district, District 7 that, again, stretched all the way down to Holmes County . . . “ *Id.*

412. Current District 7 includes “part of Lorain County, part of Medina County, all of Holmes County, all of Ashland County, all of Coshocton County, and there’s more . . . it is a long and meandering . . . district” that stretches far from Mr. Griffiths’s community in “the southwestern part of Cleveland.” *Id.* at 46:18-23; 40:9-17.

413. Under Plaintiffs’ Proposed Remedial Plan, Mr. Griffiths would live in Proposed Remedial District 9. *Id.* at 40:6-8; Trial Ex. P090, Cooper Decl. ¶ 33.

414. In Dr. Cho’s simulated maps, based on 2008 and 2010 data, the minimum, maximum, mean and median Democratic vote share in the districts Mr. Griffiths would be in are 41.8%, 72.1%, 52.0%, and 51.3% respectively. Trial Ex. P087, Cho Report at 13-29 (illustrated in PD106). All of Mr. Griffiths’ districts in Dr. Cho’s simulated maps would have provided him with a higher likelihood of electing a Democrat. Trial Ex. P087, Cho Report at 19.



415. In Dr. Cho's simulated maps, based on 2018 data, the minimum, maximum, mean and median Democratic vote share in the districts Mr. Griffiths would be in are 38.0%, 80.0%, 50.5%, and 52.3% respectively. Trial Ex. P426, Cho Suppl. Report at 7 (illustrated in PD109).

8. *Congressional District 8*

416. Lawrence Nadler is a U.S. citizen registered to vote in Ohio and is an active voter, having voted in every election he can recall including elections for U.S. Congress. Nadler Dep., ECF No. 230-36 at 8:4-17; 10:13-11:6.

417. He identifies as a Democrat, and has voted for a Democrat in almost every election he can recall, including always having voted for a Democratic U.S. congressional representative. *Id.* at 8:4-17.

418. Mr. Nadler lives at 1430 Dana Drive, Oxford, Ohio, where he has resided for 28 years, located in Ohio's Eighth Congressional District where Democratic voters are cracked under the current map. *Id.* at 6:15-7:6.

419. Mr. Nadler is active with the Democratic Party in multiple ways, including as "a member . . . involved in a couple of PACs I have done everything from . . . standing outside at a protest . . . to the women's march, to signing petitions, to writing letters, op-ed-type pieces that appeared in a couple of places." *Id.* at 16:18-17:5.

420. He is also a precinct executive in Oxford, Ohio, *id.* at 18:19-21, and a member of the Democratic Party's Central Committee for Butler County, *id.* at 19:12-15.

421. Through his political engagement including canvassing, Mr. Nadler testified that "there are people that I personally have encountered, who feel that it's not worth their time to vote . . . because it's not going to make any difference." *Id.* at 28:6-12; *see id.* at 47:10-17; 70:4-13.

422. Because of this voter apathy, Mr. Nadler's ability to get out the vote for Democratic candidates in his area is inhibited. *Id.* at 28:13-20; 29:3-7; 36:8-19; 90:17-91:16.

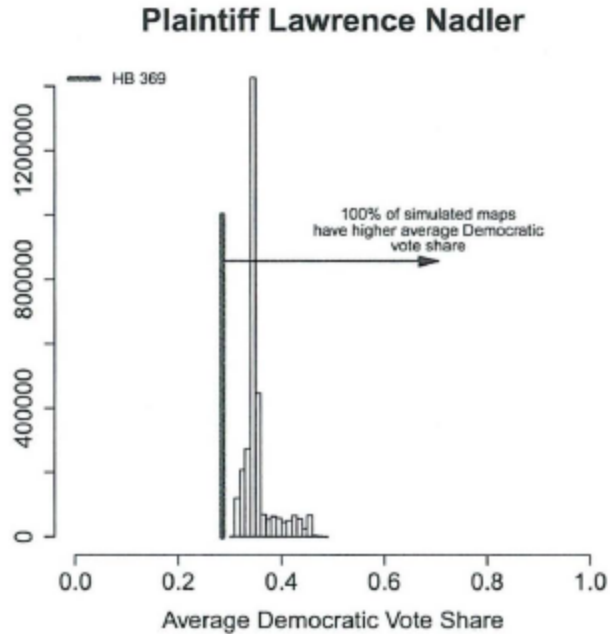
423. Mr. Nadler feels that his representative, Warren Davidson, does not have to care about his vote, because he is sure to be reelected. *Id.* at 41:20-42:-25.

424. For example, every month Mr. Nadler asks one of Davidson's aides if Davidson will come to his area of the district for a town hall, but he has never seen him. *Id.* at 30:5-31:12. Mr. Nadler identified many instances in which he and others tried to reach out to Representative Davidson and received no response. *Id.* at 92:3-93:8.

425. Because the map makes Mr. Nadler's district so safe for a Republican, his representative is farther to the right than he would otherwise be. *Id.* at 68:19-69:21. "[I]f [Davidson] were listening to people, providing an open forum or multiple meetings for people to be heard, that it could moderate his views a little bit To be honest with you, I think he doesn't do it because he knows he doesn't have to do it." *Id.*

426. Under Plaintiffs' Proposed Remedial Plan, Mr. Nadler would live in Proposed Remedial District 8. *Id.* at 6:15-7:6; Trial Ex. P090, Cooper Decl. ¶ 33.

427. In Dr. Cho's simulated maps, based on 2008 and 2010 data, the minimum, maximum, mean and median Democratic vote share in the districts Mr. Nadler would be in are 30.6%, 48.1%, 35.5%, and 34.7% respectively. Trial Ex. P087, Cho Report at 13-29 (illustrated in PD106). All of Mr. Nadler's districts in Dr. Cho's simulated maps would have provided him with a higher likelihood of electing a Democrat. Trial Ex. P087, Cho Report at 20.



428. In Dr. Cho’s simulated maps, based on 2018 data, the minimum, maximum, mean and median Democratic vote share in the districts Mr. Nadler would be in are 28.6%, 53.7%, 37.5%, and 37.0% respectively. Trial Ex. P426, Cho Suppl. Report at 7 (illustrated in PD109).

9. Congressional District 9

429. Plaintiff Tristan Rader resides at 1348 St. Charles Avenue, Lakewood, Ohio, located in Ohio’s Ninth Congressional District, which is packed under the 2012 congressional map. Rader Dep., ECF No. 230-40 at 8:20-9-25; 13:14-17; 66:19-24; 74:15-75:10; 93:9-25; 97:25-98:4; 98:24-99:4.

430. Mr. Rader has voted in every congressional election at least since moving to his current residence in October 2013. *Id.* at 8:23-9:6; 17:14-23.

431. Mr. Rader is a Democratic voter and has supported Democratic candidates for Ohio’s congressional delegation in the past. *Id.* at 18:14-20; 120:5-15.

432. Mr. Rader has worked on numerous campaigns for Democratic candidates, including his own campaign for Lakewood City Council. *Id.* at 29:23-30:15; 31:3-13; 31:18-32:21; 50:6-9; 119:21-120:4.

433. Mr. Rader ran for Lakewood City Council in 2017. *Id.* at 19:22-20:12. Mr. Rader has served on Lakewood City Council since January 2018. *Id.*

434. As part of his work for MoveOn.org, Mr. Rader conducted volunteer recruitment and field organizing on behalf of the Unite Against Hate campaign's Democratic slate of candidates, which included Hillary Clinton for President and Ted Strickland for Senate. *Id.* at 29:23-30:15.

435. As part of his work for the Bernie Sanders 2016 Presidential Campaign, Mr. Rader was responsible for making sure that Senator Sanders was on the ballot in every county in New Jersey and Ohio. *Id.* at 31:3-13; 31:18-32:21.

436. Mr. Rader worked on Democrat Mitch Fallis's campaign for mayor of the city of Lorain. *Id.* at 50:10-16.

437. Mr. Rader worked on Democrat Michael Skindell's campaign for mayor of the city of Lakewood. *Id.* at 50:17-22.

438. Mr. Rader worked on Democrat Keith Mundy's campaign for Congress in Ohio's 16th Congressional District. *Id.* at 50:25-51:8.

439. Mr. Rader worked on Democrat John Wisniewski's campaign for governor of New Jersey. *Id.* at 27:20-29:3. As part of this campaign, Mr. Rader engaged in field organizing and volunteer recruitment. *Id.*

440. Mr. Rader also has worked for and is a member of a number of different civil and political organizations. *Id.* at 22:3-11; 23:21-24:25; 25:6-17; 37:23-38:14; 38:22-39:5; 46:9-21.

441. As part of his work at the AIDS Healthcare Foundation, Mr. Rader organized a national phone bank campaign to persuade voters to support a drug cost savings initiative. *Id.* at 22:3-11.

442. As part of his work with SEIU, Mr. Rader organized volunteers and paid canvassers for the Democratic slate of candidates supported by the organization. *Id.* at 23:21-24:25; 25:6-17.

443. Mr. Rader re-activated Cleveland State University's Young Democrats Chapter. *Id.* at 37:23-38:14. As a member of this organization, Mr. Rader tabled around the school and organized an event for an Ohio Senate candidate. *Id.* at 38:22-39:5.

444. As a member of the Cuyahoga County Progressive Caucus, Mr. Rader campaigned against a county initiative to rehab the Q Arena in Cleveland. *Id.* at 46:9-21.

445. Mr. Rader spoke at a meeting of the League of Women Voters about Issue 1. *Id.* at 52:16-53:22.

446. Mr. Rader also campaigned on behalf of Issue 1 by posting on social media and supported those individuals the collecting of signatures to get Issue 1 on the ballot. *Id.* at 56:9-17.

447. Mr. Rader's vote in Ohio's Ninth Congressional District has been diluted through the packing of Democratic voters. *Id.* at 66:19-24; 74:15-75:10; 93:9-25; 97:25-98:4; 98:24-99:4.

448. The geographic distances between areas in Ohio's Ninth Congressional District have hampered constituent services and made it difficult for Representative Marcy Kaptur to adequately represent her constituents. *Id.* at 66:24-67:19.

449. The fact that the congressional races in Ohio's Ninth Congressional District are not competitive has caused Representative Kaptur to "not draw in very good competition" and as a result, "she doesn't have to be as out there as someone running in a more competitive race." *Id.* at 77:10-20; 80:16-25.

450. The geographic distance between areas in Ohio's Ninth Congressional District has made it more difficult for him to organize constituents to visit Representative Kaptur's office in Toledo. *Id.* at 111:9-112:10.

451. The current congressional map has hurt Mr. Rader's ability to campaign for Democratic candidates. *Id.* at 121:6-24. As an example, Mr. Rader said that it was difficult to campaign for Democratic congressional candidate Keith Mundy in Ohio's 16th Congressional District because voters felt that the "district is already stacked or the outcome is predetermined." *Id.*

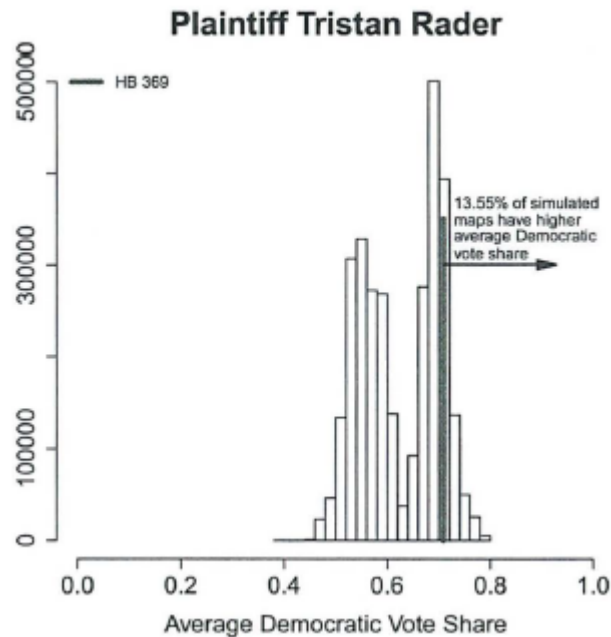
452. The current congressional map has hurt Mr. Rader's ability to fundraise and recruit volunteers for Democratic candidates. *Id.* at 121:10-122:12. As an example, Mr. Rader said that it was difficult to raise funds or recruit volunteers for Democratic congressional candidate Keith Mundy in Ohio's 16th Congressional District because voters "don't want to give or get involved because they think the way that the districts are drawn has created, again, like I said, a predetermined outcome." *Id.* at 121:11-20.

453. The current congressional map "discourages people from voting" by creating voter apathy. *Id.* at 122:22-123:18. Specifically, Mr. Rader testified that he has observed voters who believe, "Why should I vote because it doesn't matter? There's nothing I can do about it, so I don't care." *Id.* at 123:11-15.

454. Under Plaintiffs' Proposed Remedial Plan, Mr. Rader would live in Proposed Remedial District 9. *Id.* at 8:20-9:25; Trial Ex. P090, Cooper Decl. ¶ 33.

455. In Dr. Cho's simulated maps, based on 2008 and 2010 data, the minimum, maximum, mean and median Democratic vote share in the districts Mr. Rader would be in are 38.0%, 79.1%, 62.5%, and 62.0% respectively. Trial Ex. P087, Cho Report at 13-29 (illustrated

in PD106). 13.55% of Mr. Rader's districts in Dr. Cho's simulated maps would have provided him with a higher likelihood of electing a Democrat. Trial Ex. P087, Cho Report at 21-22.



456. In Dr. Cho's simulated maps, based on 2018 data, the minimum, maximum, mean and median Democratic vote share in the districts Mr. Rader would be in are 39.4%, 82.5%, 63.5%, and 56.8% respectively. Trial Ex. P426, Cho Suppl. Report at 7 (illustrated in PD109).

457. Plaintiff Chitra Muliyl Walker resides at 1419 Lakewood Avenue, Upper Unit, Lakewood, Ohio, 44107, located in Ohio's Ninth Congressional District, which is packed under the 2012 map. Walker Dep., ECF No. 230-50 at 8:12-15; 9:13-17; 23:12-24; 40:20-41:3; 57:17-58:15; 85:18-86:15.

458. Ms. Walker believes she has voted in every congressional election since 2008 except when she was out of the country. *Id.* at 16:2-10; 82:18-23; 83:4-6; 83:10-85:3.

459. Ms. Walker is a Democratic voter and has supported Democratic candidates for Ohio's congressional delegation in the past. *Id.* at 11:22-25; 91:4.

460. Ms. Walker is a member of a number of several civic and political organizations. *Id.* at 19:24-20:6; 20:21-22:4; 26:9-27:2; 28:6-20; 67:16-21

461. As a member of the Lakewood Democratic Club, Ms. Walker has voted to endorse Democratic candidates for political office. *Id.* at 19:24-20:6.

462. As a member of the League of Women Voters' Lakewood Chapter, Ms. Walker participated in voter registration efforts, organized candidate's nights, educated voters on various issues, and petitioned for Issue 1. *Id.* at 20:21-22:4; 67:16-21.

463. As a member of the Cuyahoga Women's Democratic Caucus, Ms. Walker attends meetings and supports Democratic candidates. *Id.* at 26:9-27:2.

464. As part of the executive committee for the Cuyahoga Democratic Party, Ms. Walker votes for candidates for political office. *Id.* at 28:6-20.

465. Ms. Walker served as the treasurer for Democrat Cindy Marx's 2013 and 2017 campaigns for Lakewood City Counsel At-Large. *Id.* at 25:10-18.

466. Ms. Walker sends Representative Kaptur letters and attends Representative Kaptur's constituent meetings. *Id.* at 42:3-12.

467. Ms. Walker's vote in Ohio's Ninth Congressional District has been diluted through the packing of Democratic voters. *Id.* at 23:12-24; 40:20-41:3; 57:17-58:15; 85:18-86:15.

468. Ms. Walker knows Democratic voters who feel like their vote doesn't matter because of the way the current congressional map has been gerrymandered. *Id.* at 88:14-23; 89:16-25.

469. Ms. Walker believes the geographic distances between areas in Ohio's Ninth Congressional District make it difficult for Representative Marcy Kaptur to adequately represent

all her constituents. *Id.* at 41:7-13. For example, Ms. Walker testified that she had not seen Representative Kaptur in her neighborhood. *Id.* at 41:18-19.

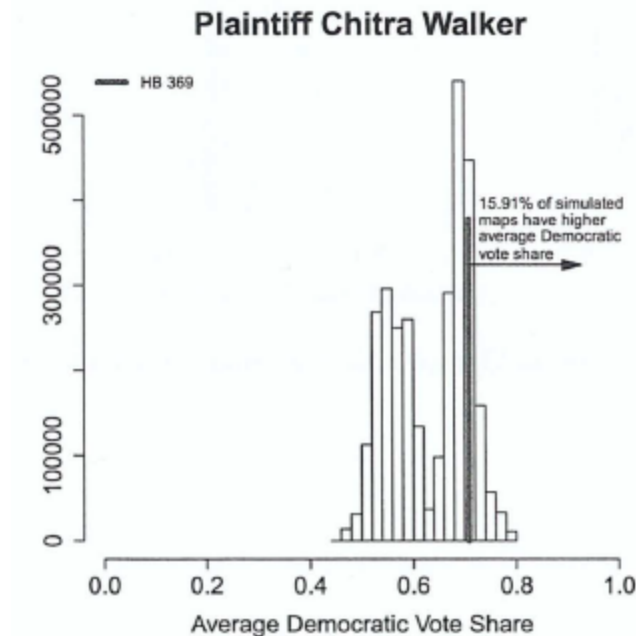
470. The geographic distances between areas in Ohio's Ninth Congressional District make it more difficult to campaign for Democratic candidates. *Id.* at 42:24-43:5.

471. Ms. Walker thinks the current congressional map makes it harder to fundraise for her candidates of choice because people believe that the "candidate's going to win anyway." *Id.* at 44:20-22; 87:2-5.

472. Ms. Walker thinks the current congressional map has hurt her ability to educate voters because voters feel like their "vote is going to be manipulated in some way." *Id.* at 92:13-19.

473. Under Plaintiffs' Proposed Remedial Plan, Ms. Walker would live in Proposed Remedial District 9. *Id.* at 8:12-15; Trial Ex. P090, Cooper Decl. ¶ 33.

474. In Dr. Cho's simulated maps, based on 2008 and 2010 data, the minimum, maximum, mean and median Democratic vote share in the districts Ms. Walker would be in are 44.6%, 79.3%, 63.4%, and 66.2% respectively. Trial Ex. P087, Cho Report at 13-29 (illustrated in PD106). 15.91% of Ms. Walker's districts in Dr. Cho's simulated maps would have provided her with a higher likelihood of electing a Democrat. Trial Ex. P087, Cho Report at 21.



475. In Dr. Cho’s simulated maps, based on 2018 data, the minimum, maximum, mean and median Democratic vote share in the districts Ms. Walker would be in are 40.1%, 82.5%, 63.5%, and 56.8% respectively. Trial Ex. P426, Cho Suppl. Report at 7 (illustrated in PD109).

10. Congressional District 10

476. Plaintiff Ria Megnin resides at 2104 King Avenue, Dayton, Ohio, 45420. Megnin Dep., ECF No. 230-32 at 9:4-7. She lives in Ohio’s Tenth U.S. Congressional District, where Democratic voters are cracked under the current map. *Id.* at 13:2-15; 101:18-24.

477. Ms. Megnin identifies as a Democrat. *Id.* at 71:18-19. She almost always votes Democrat, including having voted for a Democratic U.S. congressional representative each election in her recent memory. *Id.* at 67:17-69:14.

478. Ms. Megnin canvasses for Democratic candidates and issues on a regular basis. *Id.* at 71:23-24.

479. Because of the voter apathy caused by the map, she has a difficult time gathering support for Democratic candidates in her district. *Id.* at 59:17-60:21; 88:10-89:19; 106:10-23.

Based on her experience, Ms. Megnin testified, “[N]o matter how many doors we knocked on, how many campaign supports we did, how much strategizing we did, our structure guarantees that the people would not be able to be competitive in being represented.” *Id.* at 78:9-13.

480. She herself would consider running for local office, but does not believe she “would have a chance of going beyond local because of the gerrymandering.” *Id.* at 84:14-19.

481. Ms. Megnin feels that as a Democrat in District 10, her Representative does not engage with her or other “residents of Dayton itself or other communities that might not be fully supportive of his views.” *Id.* at 17:13-16. For example, she testified, “Mike Turner has not held a town hall meeting for his local constituents in his sixteen years as a congressional representative.” *Id.* at 17:5-8; *see id.* at 17:5-18:11; 62:16-63:24.

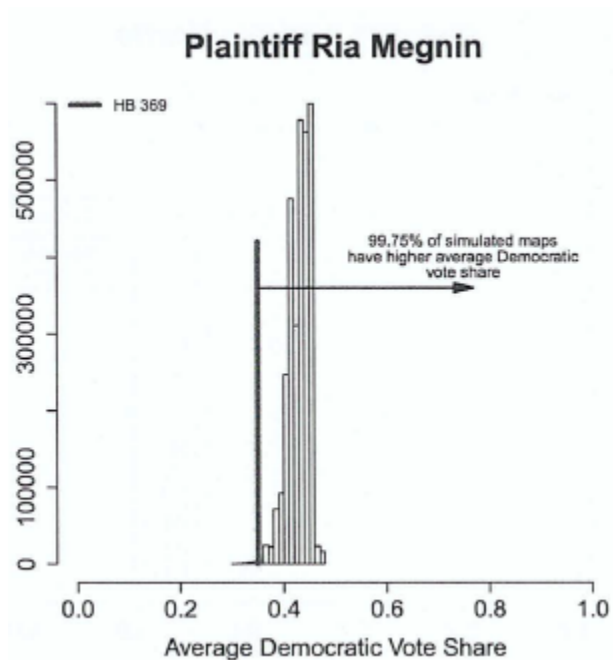
482. She has tried to call Representative Turner’s office “around a dozen” times over the past several years without receiving a response, *id.* at 18:17-19:23; 20:3-22:3, and has had a similar experience with email and electronic petitions, *id.* at 23:3-25:5.

483. Ms. Megnin is “part of various groups, loosely, that have raised concerns with [Turner] in the past and have shared that he has not responded to them.” *Id.* at 26:5-8. For example, a faith group she is a part of planned a rally “outside of Congressman Turner’s office and it is called We’re Dying to See Our Congressman, again, because he has not held a town hall in sixteen years. There’s going to be skeletons sitting in cars.” *Id.* at 26:10-20; *see id.* at 45:9-46:2.

484. The gerrymandered map favors Representative Turner to such an extent that Democratic candidates are unable to overcome it, regardless of their level of support. *Id.* at 59:17-60:21.

485. Under Plaintiffs' Proposed Remedial Plan, Ms. Megnin would live in Proposed Remedial District 10. *Id.* at 9:4-7; Trial Ex. P090, Cooper Decl. ¶ 33.

486. In Dr. Cho's simulated maps, based on 2008 and 2010 data, the minimum, maximum, mean and median Democratic vote share in the districts Ms. Megnin would be in are 31.0%, 47.9%, 43.1%, and 43.6% respectively. Trial Ex. P087, Cho Report at 13-29 (illustrated in PD106). 99.75% of Ms. Megnin's districts in Dr. Cho's simulated maps would have provided her with a higher likelihood of electing a Democrat. Trial Ex. P087, Cho Report at 23.



487. In Dr. Cho's simulated maps, based on 2018 data, the minimum, maximum, mean and median Democratic vote share in the districts Ms. Megnin would be in are 29.1%, 50.0%, 43.5%, and 43.7% respectively. Trial Ex. P426, Cho Suppl. Report at 7 (illustrated in PD109).

11. Congressional District 11

488. Plaintiff Andrew Harris has resided in the Eleventh Congressional District throughout the last ten years. Harris Dep., ECF No. 230-17 at 7:7-8:19. He currently lives at 3877 Silsby Road, University Heights, Ohio, 44118. *Id.* at 7:4-8.

489. Mr. Harris registered to vote in the State of Ohio as a Democrat when he turned 18 in 2008. *Id.* at 10:9-13.

490. He is an active Ohio voter and votes “Democrats up and down the ballot.” *Id.* at 11:8-11.

491. District 11 is a packed district, and as a result Mr. Harris’ vote is diluted and is not as impactful as it would be otherwise. *Id.* at 15:24-16-20. Mr. Harris believes that “packing” occurs when there is intent to place Democrats in one area together for the purpose of diluting their vote. *Id.* at 16:5-20; 34:9-21.

492. His congressional representative is a Democrat, Representative Marcia Fudge, but she is not the candidate of his choice. Mr. Harris testified that in his view, Representative Fudge is forced to be to the left of where he considers himself to be. *Id.* at 17:16-18. He further testified that she is not allowed to be more moderate, *id.* at 17:12-15, because in a packed district, she has to pass an ideological purity test. *Id.* at 21:15-18.

493. Representative Fudge opposes Fast Track Authority and free trade generally. *Id.* at 17:7-18:3. Free trade is extremely important to Mr. Harris. *Id.* He is pro-business, and Representative Fudge’s views in these areas do not align with his. *Id.* at 18:18-20. On social issues, they agree more. *Id.* at 18:23-19:2.

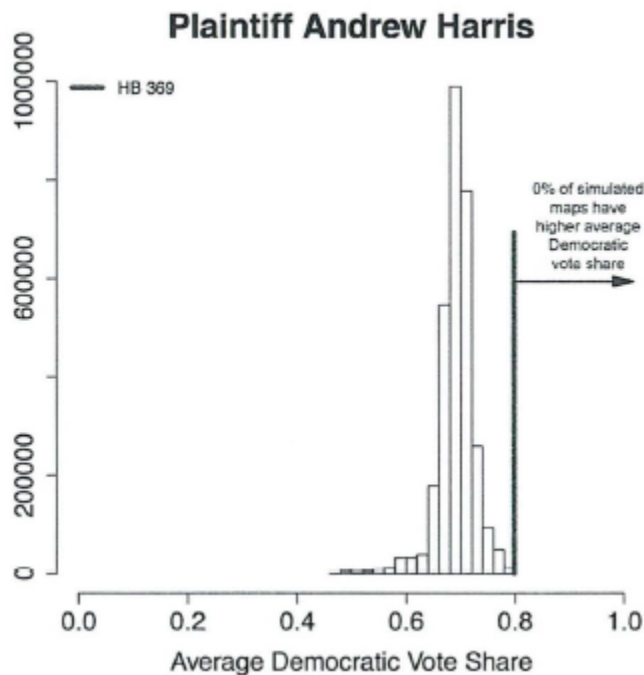
494. In Mr. Harris’s view, Representative Fudge is “from a far more liberal wing of the party that does not reflect local values, which is going to be what happens when you’re in a firm, reliably blue district.” *Id.* at 25:10-15. He testified that there would be more room for nuance in a district drawn along neutral lines. *Id.* at 28:13-16.

495. Cleveland's economy is not the same as Akron's economy; the current congressional map forces two very different communities into the same congressional district. *Id.* at 20:20-21:3; 37:25-38:13.

496. Mr. Harris testified that his Democratic friends are discouraged from voting because there is no meaningful choice in the Eleventh District. *Id.* at 23:19-24:2, 24:9-18.

497. Under Plaintiffs' Proposed Remedial Plan, Mr. Harris would live in Proposed Remedial District 11. *Id.* at 7:4-8; Trial Ex. P090, Cooper Decl. ¶ 33.

498. In Dr. Cho's simulated maps, based on 2008 and 2010 data, the minimum, maximum, mean and median Democratic vote share in the districts Mr. Harris would be in are 46.5%, 79.3%, 69.2%, and 69.4% respectively. Trial Ex. P087, Cho Report at 13-29 (illustrated in PD106). None of Mr. Harris's districts in Dr. Cho's simulated maps would have provided him with a higher likelihood of electing a Democrat. Trial Ex. P087, Cho Report at 24.



499. In Dr. Cho's simulated maps, based on 2018 data, the minimum, maximum, mean and median Democratic vote share in the districts Mr. Harris would be in are 48.1%, 82.5%, 78.7%, and 79.4% respectively. Trial Ex. P426, Cho Suppl. Report at 7 (illustrated in PD109).

12. *Congressional District 12*

500. Ohio's 12th District is cracked under the 2012 map. *See* Dagres, ECF No. 240 at 95:16-96:4. Plaintiff Aaron Dagres resides at 536 Keller Lane, Newark, Ohio, which is within Licking County in the 12th District. *Id.* at 84:21-85:1.

501. Prior to the 2011 redistricting in Ohio, the 12th District was "a lot more condensed" and "a lot more rectangular," consisting of Delaware County, Licking County, and parts of Franklin County. *Id.* at 88:19-23.

502. The current map "removed a large urban population of Franklin County that used to exist within the 12th Congressional District and then spread it out in multiple directions, including those rural sections of Marion, Morrow County, Richland County, and Muskingum County . . . even dividing up multiple communities like Mansfield, Zanesville, Maysville area." *Id.* at 89:3-10. Four of the seven counties in the current 12th District are split. *Id.* at 88:12-18.

503. District 12 was represented by Representative Pat Tiberi, a Republican, until his resignation in January of 2018. *Id.* at 90:4-7. Following Representative Tiberi's departure, a special election was held in which Republican Troy Balderson defeated Democrat Danny O'Connor. Representative Balderson defeated Mr. O'Connor again in the subsequent 2018 general election. *Id.* at 89:24-90:24.

504. Representative Tiberi "refused to partake in public forums and town halls on the issue of the Affordable Care Act, so much so that organizations were holding events and inviting him to these town halls, which he did not attend . . . And in the place of his presence, the

organizations actually designed a cardboard cutout of Pat Tiberi that we referred to as Flat Pat, who would stand in for him at these town halls.” *Id.* at 96:9-18.

505. Several “Flat Pat” town halls took place in 2017, followed by another in 2018 when Representative Tiberi resigned. *Id.* at 96:20-97:2.

506. Mr. Dagres is a registered Democratic voter and has consistently voted for Democratic candidates for Congress. *Id.* at 85:10-18. He has “voted Democrat [his] entire voting life with one exception,” when in 2012 when he pulled a Republican ballot in the primary in order to vote for a Republican underdog in order to extend the Republican primary process, to advantage the Democratic candidate. *Id.* at 85:12-22. Mr. Dagres voted for Danny O’Connor in both the special and general elections in 2018. *Id.* at 90:20-91:1.

507. Although Mr. Dagres is an adjunct professor of political science, *id.* at 83:19-21, he does not claim to be an expert on maps or map drawing, and testifies as a “damaged voter” and political activist, *id.* at 84:12-20.

508. As a voter, Mr. Dagres is injured by the current congressional map because District 12 “diluted” the voice of Democratic voters like him by “crack[ing]” the urban section of the district among a large area of rural counties. *Id.* at 95:16-96:4.

509. Among the particular issues of importance to Mr. Dagres are health care and gun control reform. *Id.* at 92:3-8. As a “father of three,” who believes that “healthcare is a fundamental human right,” it is “extraordinarily important” to Mr. Dagres “that everyone has that fundamental human right.” *Id.* at 92:9-19. As a veteran who “grew up as a hunter, always a gun owner,” Mr. Dagres was “hit . . . hard” by the events of the February 14, 2018 Parkland shooting, and sees gun control as “essential to the safety of our children, to the safety of my children,” to the point that he destroyed or donated his own firearms. *Id.* at 92:20-93:17.

510. Neither Representative Tiberi nor his successor, Representative Balderson, represents Mr. Dagres's views, including on health care and gun control. *Id.* at 93:18-94:12. Mr. O'Connor reflected Mr. Dagres's views "a lot more accurately." *Id.* at 94:13-18.

511. Mr. Dagres does not contend that he has an entitlement to a representative who agrees with him on all of his views. Rather, his injury lies in that the current congressional map provides "very little reason for an elected official to ever hear the voices of" the community, because "their only threat to losing their position in that incumbency status comes from within their own party's primary, which eliminates a large majority of voters within a district[.]" *Id.* at 94:19-95:15.

512. Mr. Dagres is very politically active in the 12th District. *Id.* at 86:4-87:22. He recently stepped down as the elected president of the Licking County Democratic Club PAC, has served on the Licking County Central and Executive Committee, volunteered on multiple campaigns, and ran in the 2008 Democratic primary for the 12th District congressional race. *Id.* at 86:4-16.

513. Mr. Dagres has also participated in "membership drives, direct voter contact, engaging with voters, registering voters, recruiting candidates, as well as fundraising for local candidates." *Id.* at 86:21-87:2.

514. He has also participated in "voter outreach, Get Out the Vote events, direct contacts through things like phone banks, mailings, especially to my precinct, direct mailings to voters, and engaging voters on door-to-door canvasses[.]" *Id.* at 87:3-13.

515. Both within his PAC role and within the official Democratic Party of Licking County, Mr. Dagres has conducted voter registration events at fairs and festivals. *Id.* at 87:14-20.

516. The 2011 congressional district map has “creat[ed], from engagement purposes, an overwhelming sense of apathy when you look at a map and realize absolutely no way for a change to happen for the swing to go from a Republican to a Democrat or vice versa.” *Id.* at 96:1-4.

517. Mr. Dages’ political activities, including Get Out the Vote, have been “substantially impacted” and impaired by the 2011 congressional map “because the voter apathy has been so high. When people look at result after result and realize that there is absolutely no opportunity for victory because of this map, it discourages them from partaking in what is such an important part of our American democracy and that is using their right to vote.” *Id.* at 97:12-17.

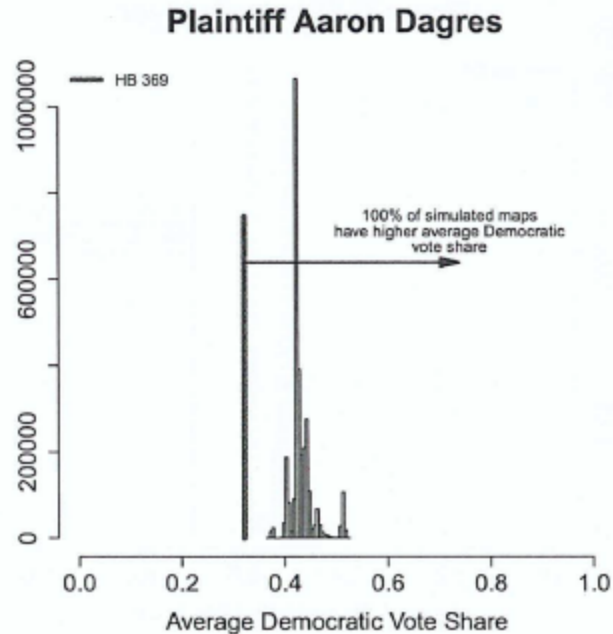
518. Mr. Dages’s and Democratic candidates’ ability to fundraise successfully in the 12th District has also been substantially impacted by the 2011 district map, as donors are hesitant to contribute to a candidate “that they know cannot win[.]” *Id.* at 97:18-98:1. For example, in 2010, prior to the enactment of the current map, the Democratic candidate raised “just below” \$1.5 million. Between that race and the 2018 special election, no Democratic candidate raised more than \$30,000. *Id.* at 98:2-6. In 2016, for example, Democrat Ed Albertson raised approximately \$28,000 for the congressional race, while Representative Tiberi raised approximately \$4.5 million. *Id.* at 98:7-9.

519. The design of District 12 also presents a “huge hindrance” to Mr. Dages’s and other Democratic activists’ efforts to recruit candidates to run for congressional office as a Democrat, as “when a map is so designed for a predetermined outcome, it’s very difficult to get somebody to say, Yeah, I’m willing to do that, to sacrifice my time from my career, my time from my family, my own personal money, knowing that I am not going to win.” *Id.* at 98:15-25.

520. The 2018 special election was an aberrant event for District 12. “The eyes of the entire nation were on us. It was the only election on that day. There had been . . . special elections throughout the year, and the focus of the national media was on the race. So it was – you could not turn on your television and not know that we were having a special election in Ohio’s 12th Congressional District.” *Id.* at 99:6-13. Those unique conditions allowed for a substantial increase in fundraising for Danny O’Connor, as compared to earlier Democratic candidates. *Id.* at 99:14-19. Yet even with an advantage in fundraising, and with higher voter turnout than the 2014 general election, the Democratic candidate “still could not win because the map was designed for [the Republican candidate] to stay.” *Id.* at 99:20-24, 100:11-17.

521. Under Plaintiffs’ Proposed Remedial Plan, Mr. Dages would live in Proposed Remedial District 12. *Id.* at 84:21-85:1; Trial Ex. P090, Cooper Decl. ¶ 33.

522. In Dr. Cho’s simulated maps, based on 2008 and 2010 data, the minimum, maximum, mean and median Democratic vote share in the districts Mr. Dages would be in are 36.8%, 52.2%, 43.2%, and 42.5% respectively. Trial Ex. P087, Cho Report at 13-29 (illustrated in PD106). All of Mr. Dages’ districts in Dr. Cho’s simulated maps would have provided him with a higher likelihood of electing a Democrat. Trial Ex. P087, Cho Report at 25.



523. In Dr. Cho’s simulated maps, based on 2018 data, the minimum, maximum, mean and median Democratic vote share in the districts Mr. Dages would live in are 32.9%, 61.8%, 39.0%, and 38.3% respectively. Trial Ex. P426, Cho Suppl. Report at 7 (illustrated in PD109).

13. Congressional District 13

524. Elizabeth Myer lives in Congressional District 13, where Democratic voters are packed under the 2012 map. Myer, ECF No. 240 at 112:22-113:6. She has lived at 82 Oriole Drive, Youngstown, Ohio in Trumbull County for more than 20 years. *Id.*

525. Dr. Myer has lived and worked in the Youngstown area for most of her life. *Id.* at 113:4-11.

526. This area, her “community,” “is called the Mahoning Valley, and it involves two small cities, Youngstown and Warren, with seriously declining populations, high unemployment rate. There is working class industrial area, and the surrounding area is – there’s some countryside, but it’s pretty much small businesses and industries that feed into the region with,

like, small steel mills, a GM plant which is now closing, last shift on Friday.” *Id.* at 114:18-115:5; *see also id.* at 128:25-129:24.

527. District 13 includes some of Dr. Myer’s community, then “extends [westward] across the countryside, tiny towns, across Portage County, and cuts into Akron and extends up into the north Akron suburbs.” *Id.* at 115:6-8; *see also id.* at 120:5-11.

528. Dr. Myer is a registered Democrat, and so is her congressperson, Tim Ryan. *Id.* at 113:23-114:4. She has voted in every single congressional election since registering to vote. Myer Dep., ECF No. 230-35 at 12:15-20.

529. As an Ohio Democrat, Dr. Myer has spent time supporting Democratic campaigns including having “made phone calls . . . done canvassing . . . worked at rallies as a volunteer . . . given money and gone to fundraisers and worked as a poll monitor.” Myer, ECF No. 240 at 118:17-23. Her aim in these efforts is to Get Out the Vote for Democrats. *Id.* at 119:20-22.

530. For instance, Dr. Myer “made phone calls, went door-to-door canvassing, and volunteered at a rally” for the 2016 Hillary Clinton presidential campaign, in the Youngstown area in District 13. *Id.* at 119:3-15.

531. In canvassing Democrats, Dr. Myer found that “people are very apathetic and don’t really even care to vote . . . “ *Id.* at 120:12-17. The people in her community are “confused even in what district they’re in and who their representative might be at times,” and they feel the “system is rigged,” their “vote’s not going to make any difference,” and “it’s already set up.” *Id.* at 120:19-121:3.

532. Because of the confusion and apathy the 2012 map generates, Dr. Myer has a more difficult time getting out the vote for Democrats. *Id.* at 121:4-11.

533. As a Democrat packed into District 13, Dr. Myer's vote is "not making any difference, because when it comes to the House of Representatives, [her] guy's going to win . . . Tim Ryan's going to win whether [she] vote[s] or not." *Id.* at 121:12-21. Dr. Myer believes that because of the 2012 map, "I could sit at home or just skip that little box on the ballot and it's not going to change the outcome." *Id.*

534. In District 13, Representative Ryan "doesn't have to do anything to really get elected. He doesn't even seriously campaign anymore. He's going to be elected regardless." *Id.* at 116:11-25.

535. Since Representative Ryan "doesn't have to worry about being reelected," Dr. Myer feels "he doesn't have to really be out there addressing [voters'] needs." *Id.* at 117:14-18.

536. For instance, regarding the recent "closing of th[e] [Youngstown-area] GM plant which is causing thousands and thousands of people to become unemployed," Dr. Myer saw "Sherrod Brown frequently addressing this issue, and . . . did not see as much of Tim Ryan" *Id.* at 117:3-8.

537. Because of District 13's shape, Representative Ryan "has two completely separate communities to deal with . . . the Youngstown Mahoning Valley has a lot of big needs, but then Akron has other needs . . . it's a completely different community." *Id.* at 117:19-24.

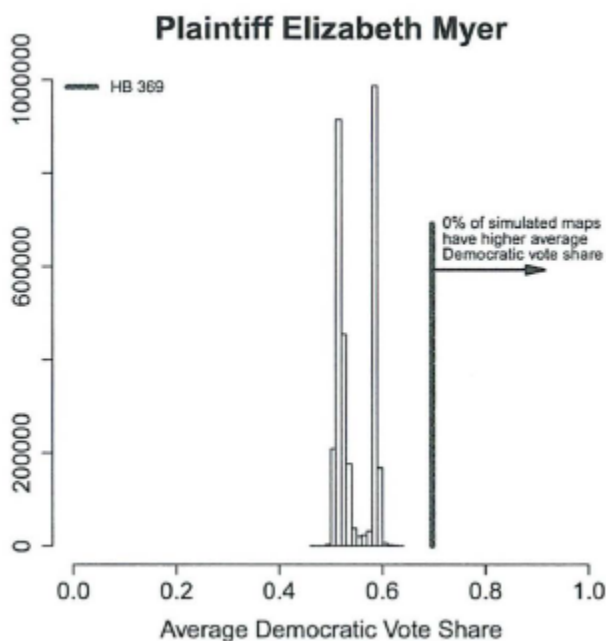
538. In prior years, Dr. Myer's "district was really concentrated around the Mahoning Valley. Now it extends over and involves Akron . . . so [Representative Ryan] has to really spread his – his time across a wide area of – of [] two different communities." *Id.* at 116:15-25.

539. Though Dr. Myer votes in Democratic primaries, Representative Ryan "often is . . . unopposed on some occasions. He really doesn't have a lot of competition." *Id.* at 115:23-116:1. Because the 2012 map makes it nearly certain that Representative Ryan will win

congressional elections in District 13, there “hasn’t really been a viable challenger” to Representative Ryan in Dr. Myer’s memory. *Id.* at 116:2-5.

540. Under Plaintiffs’ Proposed Remedial Plan, Dr. Myer would live in Proposed Remedial District 13. *Id.* at 112:22-23; Trial Ex. P090, Cooper Decl. ¶ 33.

541. In Dr. Cho’s simulated maps, based on 2008 and 2010 data, the minimum, maximum, mean and median Democratic vote share in the districts Dr. Myer would be in are 47.0%, 63.2%, 54.7%, and 52.9% respectively. Trial Ex. P087, Cho Report at 13-29 (illustrated in PD106). None of Dr. Myer’s districts in Dr. Cho’s simulated maps would have provided her with a higher likelihood of electing a Democrat. Trial Ex. P087, Cho Report at 26.



542. In Dr. Cho’s simulated maps, based on 2018 data, the minimum, maximum, mean and median Democratic vote share in the districts Dr. Myer would be in are 46.4%, 56.0%, 49.3%, and 48.7% respectively. Trial Ex. P426, Cho Suppl. Report at 7 (illustrated in PD109).

14. *Congressional District 14*

543. Plaintiff Beth Ann Blewitt Hutton lives at 7089 Hayes Boulevard, Mentor, Ohio, located in Ohio's Fourteenth Congressional District. Hutton Dep., ECF No. 230-20 at 8:21-24; 9:23-10:4.

544. Ms. Hutton has voted in every single election since registering to vote around 1971. *Id.* at 11:23-12:17. She has always voted for a Democratic candidate in statewide races. *Id.* at 14:9-17. With the exception of Representative Steve LaTourette, Ms. Hutton has always voted for Democratic candidates at the federal level. *Id.* at 14:22-15:17. Ms. Hutton only votes in Democratic primary elections. *Id.* at 12:18-25.

545. The current congressional map made it more difficult for Ms. Hutton to elect her candidate of choice. *Id.* at 53:21-23; 54:22-55:17; 58:6-59:6.

546. Since around 1983, Ms. Hutton has been actively involved with the League of Women Voters, serving as President of the Lake County League several times and has served, for the last 12 years, as the Voter Service Chair. *Id.* at 17:8-19.

547. One of Ms. Hutton's main responsibilities as Voter Services Chair for the League is to put together the Voter Service Guide, which collects information from questionnaires sent to all candidates. *Id.* at 18:11-19:8. The Republican candidate for District 14 did not respond to the League's survey. *Id.* at 65:4-12; 65:21-24.

548. As Voter Services Chair for the League, Ms. Hutton also hosts candidate forums. *Id.* at 19:9-20:8. In the 2018 election cycle, Ms. Hutton invited both the Democratic and Republican candidates for District 14 to attend the forum. *Id.* at 20:14-21. Both candidates attended one forum, although the Republican candidate did not RSVP. *Id.* at 20:22-21:4.

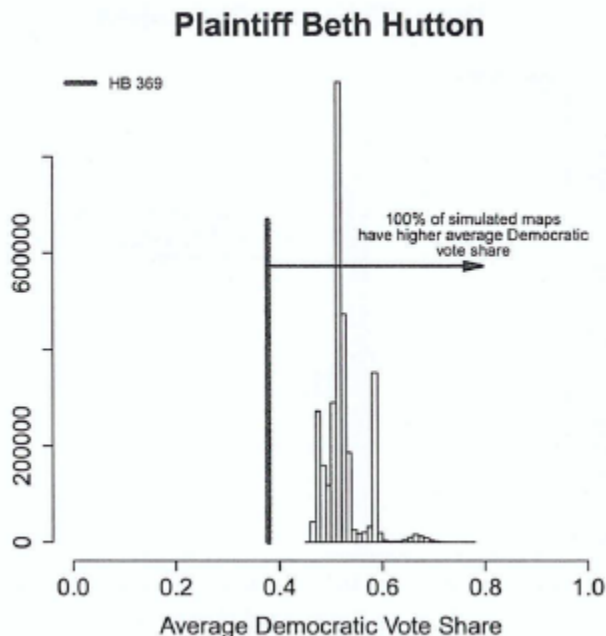
549. Ms. Hutton contacted Representative Joyce's office within the past 5 years, likely related to a gun issue. *Id.* at 67:13-68:8. She received a form letter in response. *Id.* at 68:9-15.

She has not contacted his office since because she knows “how he’s going to vote.” *Id.* at 67:13-19. Representative Joyce has done very few town halls. *Id.* at 67:7-9.

550. The way the challenged map is drawn burdens Ms. Hutton’s ability to associate and participate in the political process with other Democratic voters in the state of Ohio. *Id.* at 39:22-41:12; 41:25-42:5; 45:19-46:12; 47:7-20.

551. Under Plaintiffs’ Proposed Remedial Plan, Ms. Hutton would live in Proposed Remedial District 13. *Id.* at 8:21-24; Trial Ex. P090, Cooper Decl. ¶ 33.

552. In Dr. Cho’s simulated maps, based on 2008 and 2010 data, the minimum, maximum, mean and median Democratic vote share in the districts Ms. Hutton would be in are 46.0%, 77.6%, 52.4%, and 51.7% respectively. Trial Ex. P087, Cho Report at 13-29 (illustrated in PD106). All of Ms. Hutton’s districts in Dr. Cho’s simulated maps would have provided her with a higher likelihood of electing a Democrat. Trial Ex. P087, Cho Report at 27.



553. In Dr. Cho’s simulated maps, based on 2018 data, the minimum, maximum, mean and median Democratic vote share in the districts Ms. Hutton would be in are 46.5%, 80.3%, 49.5%, and 48.9% respectively. Trial Ex. P426, Cho Suppl. Report at 7 (illustrated in PD109).

15. Congressional District 15

554. Plaintiff Teresa Anne Thobaben lives at 1835 State Route 380, Wilmington, Ohio, located in Ohio’s Fifteenth U.S. Congressional District, where Democratic voters are cracked under the current map. Thobaben Dep., ECF No. 230-48 at 8:12-9:8. She is an active Ohio voter, having voted in every election she can recall including elections for U.S. Congress. *Id.* at 9:20-11:4.

555. Ms. Thobaben identifies as a Democrat, and has voted for a Democrat in most elections that she can recall, including always having voted for a Democratic U.S. congressional representative. *Id.* at 11:5-22.

556. Ms. Thobaben is a member of the Democratic Party and is on the Clinton County Party Executive Committee. *Id.* at 12:6-8. Through this affiliation, she “help[s] to run the elections in the – in the county. We support candidates. The committee helps to raise money at our dinners.” *Id.* at 13:8-11.

557. She has also canvassed, “door to door and did literature drops, some phone calls” for several political campaigns for presidential and local Democratic candidates, and she herself ran as a Democrat for Clinton County Commissioner in 2008 and 2010. *Id.* at 19:17-21:6.

558. Ms. Thobaben has observed that the people in her area believe “the probability of Democrats being able to get through any of their candidates is pretty remote” and that their votes do not count. *Id.* at 38:2-6.

559. This has made it more difficult to canvass for and elect Democratic candidates. *Id.* at 46:21-47:7; 60:8-12.

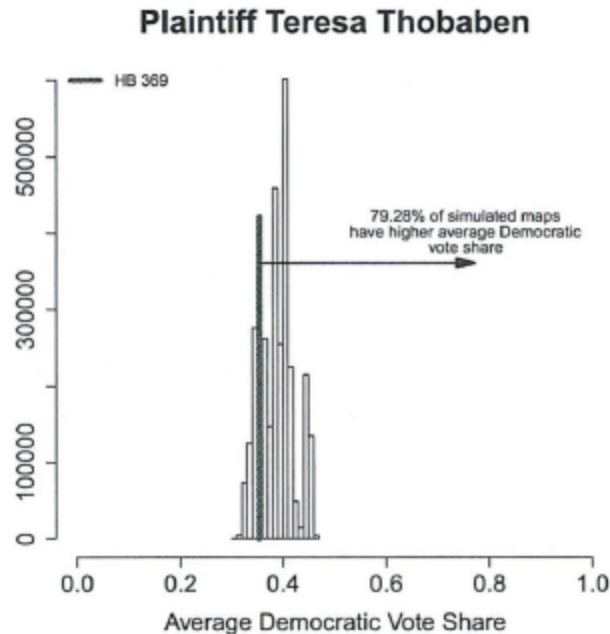
560. Ms. Thobaben testified that “[m]y vote doesn’t count because the district has been drawn in such a way that it dilutes my vote It doesn’t matter if I vote for Democrats. They don’t count.” *Id.* at 28:21-29:6; *see id.* at 36:15-17; 37:5-10.

561. She does not “feel represented by Steve Stivers He rarely comes to Clinton County.” *Id.* at 29:24-30:4.

562. She contacts her representative often using emails, texts, and she also “ha[s] him on speed dial.” *Id.* at 31:3; 30:10-13; 33:22-24. But she has either received no response or form responses. *Id.*

563. Under Plaintiffs’ Proposed Remedial Plan, Ms. Thobaben would live in Proposed Remedial District 2. *Id.* at 8:12-9:8; Trial Ex. P090, Cooper Decl. ¶ 33.

564. In Dr. Cho’s simulated maps, based on 2008 and 2010 data, the minimum, maximum, mean and median Democratic vote share in the districts Ms. Thobaben would be in are 30.8%, 46.9%, 38.9%, and 38.9% respectively. Trial Ex. P087, Cho Report at 13-29 (illustrated in PD106). 79.28% of Ms. Thobaben’s districts in Dr. Cho’s simulated maps would have provided her with a higher likelihood of electing a Democrat. Trial Ex. P087, Cho Report at 28.



565. In Dr. Cho’s simulated maps, based on 2018 data, the minimum, maximum, mean and median Democratic vote share in the districts Ms. Thobaben would be in are 27.3%, 51.8%, 37.3%, and 36.7% respectively. Trial Ex. P426, Cho Suppl. Report at 7 (illustrated in PD109).

16. Congressional District 16

566. Plaintiff Constance Rubin lives at 3088 Whitewood Street NW, North Canton, Ohio, in Stark County, located in the Sixteenth U.S. Congressional District. Rubin Dep., ECF No. 230-42 at 8:7; 8:14-15.

567. Due to the way her district is drawn, Ms. Rubin’s vote is diluted. *Id.* at 56:23-24; 57:23-58:5.

568. Ms. Rubin registered to vote in Ohio in 1973, at which time she voted Republican. *Id.* at 23:21-23; 24:4-9. She voted Republican a number of times in that era, but is now a Democrat, and finds it “highly doubtful” that she would ever vote for a Republican again. *Id.* at 24:23-25:2.

569. Ms. Rubin is a member of the League of Women Voters of Ohio, and has been since 1973. She was co-president from June 2011 to January 2014. *Id.* at 12:23-13:10.

570. She has been a member of the Stark County Democratic Party since 1984, and a member of the Central Committee from 2004 to 2010, and from 2016 to the present. *Id.* at 16:14-25.

571. Ms. Rubin has been a member of the Northern Stark County Democratic Club since 2006, was president from 2008-2010, first vice president from 2015-February 2017, and vice president again in March 2016. *Id.* at 18:13-19:3. She is currently the second vice president. *Id.* at 19:4-6.

572. Ms. Rubin has supported Democratic candidates over many election cycles, and was the Party's 2014 nominee for the State Senate in her district, District 29. *Id.* at 21:8-11.

573. Ms. Rubin is injured by the current congressional map because, as a Democrat in District 16, she has no "influence whatsoever on how [her] congressman votes, ultimately, or even considers [her] point of view." *Id.* at 26:18-23.

574. The current congressional map divides Stark County up into three different districts. *Id.* at 27:14-19. Ms. Rubin's political advocacy activity is burdened because, due to this gerrymandered district, most voters she asks "do not know who their congressman is." *Id.* at 27:5-13. When she attempts to help them determine this, it is difficult because "the boundaries on that [congressional] map do not adhere to political boundaries." *Id.* at 30:8-13.

575. Her advocacy activities are also affected by the fact that Democrats can't win in District 16. "[V]oters who continually vote for candidates who never win eventually get discouraged and stop participating." *Id.* at 40:4-7. It is difficult for her to engage with apathetic voters. *Id.* at 90:20-21.

576. She has a "difficult time finding candidates who are willing to run in districts whose outcome is preconceived. Elections cost a lot of money and a lot of time, and it's hard to

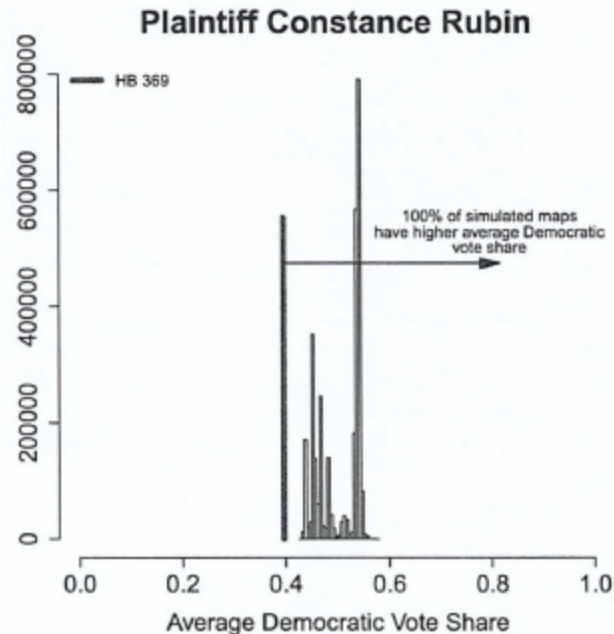
find people principled enough to run if they know their possibility of loss is a hundred percent.”
Id. at 40:14-21; 78:3-6.

577. She has no opportunity to influence how her Congressperson votes on legislation because he “knows he does not owe his allegiance to the voters; he only owes it to the party who helped put him there and who drew the district lines to assure that he would win.” *Id.* at 44:7-14; 57:25-58:5.

578. Ms. Rubin’s representative will not participate in public forums. He only meets with business owners and employees of a business. *Id.* at 45:2-12.

579. Under Plaintiffs’ Proposed Remedial Plan, Ms. Rubin would live in Proposed Remedial District 14. *Id.* at 8:7; 8:14-15; Trial Ex. P90, Cooper Decl. ¶ 33.

580. In Dr. Cho’s simulated maps, based on 2008 and 2010 data, the minimum, maximum, mean and median Democratic vote share in the districts Ms. Rubin would be in are 42.8%, 57.9%, 50.5%, and 53.4% respectively. Trial Ex. P087, Cho Report at 13-29 (illustrated in PD106). All of Ms. Rubin’s districts in Dr. Cho’s simulated maps would have provided her with a higher likelihood of electing a Democrat. Trial Ex. P087, Cho Report at 29.



581. In Dr. Cho’s simulated maps, based on 2018 data, the minimum, maximum, mean and median Democratic vote share in the districts Ms. Rubin would live in are 37.5%, 56.3%, 44.7%, and 42.3% respectively. Trial Ex. P426, Cho Suppl. Report at 7 (illustrated in PD109).

B. The gerrymander has harmed the Ohio A. Philip Randolph Institute directly and through its members.

582. The Ohio A. Philip Randolph Institute (“APRI”) is the Ohio chapter of the A. Philip Randolph Institute. Washington, ECF No. 239 at 44:2-4, 44:18-45:15, 47:7-10.

583. APRI has eight chapters across Ohio, in Toledo, Cleveland, Warren, Youngstown, Columbus, Akron-Canton, Cincinnati, and Dayton. Seven of those chapters are currently active, and the eighth, Dayton, is in the process of reviving its activities. *Id.* at 48:8-13.

584. APRI has members living in nearly every congressional district throughout the state, with the area around the southern town of Portsmouth, Ohio, probably the only exception. *Id.* at 49:25-50:7.

585. APRI is a volunteer-only operation, *id.* at 51:25-52:1, with activities funded in part by membership dues, *id.* at 48:14-25.

586. APRI is nonpartisan, but supports civil rights, labor issues, and trade unionists. *Id.* at 45:12-15; White, ECF No. 239 at 110:23-25.

587. The bulk of APRI's work consists of voter education, voter registration, civic engagement, voter outreach, and encouraging people to vote. Washington, ECF No. 239 at 44:18-45:18, 45:23-46:2.

588. Ohio's 2011 congressional district map impedes APRI's work and requires it to divert resources from its efforts by making it more difficult to engage voters through its education, registration, and outreach efforts, and by deterring and discouraging its members and other Ohio voters from engaging in the political process. *Id.* at 52:11-53:21.

589. APRI held a meeting of all of its state officers, its local officers, and representatives from each of its chapter, and unanimously made the decision to take part in this lawsuit. *Id.* at 52:6-10. APRI's goal is to obtain fair congressional districts; to put an end to the practices of packing and cracking, which make it harder for APRI to do its work in the communities that it serves. *Id.* at 52:11-17; *see also* White, ECF No. 239 at 120:19-22.

590. APRI supported Ballot Issue 1. Washington, ECF No. 239 at 68:17-24.

591. The current congressional map causes APRI to suffer diversion of resources in accomplishing its mission, causing it to "spend too much time trying to convince people to be part of the process, and instead of spending our limited resources that we have to register them[.]" *Id.* at 53:17-19.

592. Andre Washington is APRI's president, and a resident of District 12. *Id.* at 44:2-4, 54:15-55:2. He has to work to overcome a high degree of voter apathy in his own home district, District 12, as a result of the current congressional district map. In his district, "[w]hen I'm going around knocking on doors, going up and down the streets and the highways and

byways, people are not excited about voting. They feel like their vote doesn't matter or doesn't count. And it makes my job harder when I'm trying to do civil engagement and trying to empower the people to get out and vote.” *Id.* at 61:17-22.

593. The 2011 congressional district map causes voter confusion and apathy, which require APRI to divert its resources from its work to register and engage voters. “People don’t know where – where to vote. Some counties could be split up three different ways. The lines are jagged. People just don’t know where – who they vote – who they’re voting for, who their congressional representative is.” *Id.* at 52:19-22.

594. As a result of the map, APRI is forced to “spend more time trying to unconfuse [voters] about who they’re voting for. And people get upset. They – they – not only do they not know who they’re voting for, what district they’re in, people feel like their vote doesn’t count. ‘It doesn’t matter that same person is going to get back in office. My vote really doesn’t count, so why am I going to waste my time?’” *Id.* at 53:8-14.

595. But for the gerrymandered map, APRI could use its resources to register more people to vote. *Id.* at 53:17-21.

596. APRI’s members are personally affected by the map as well. APRI has many Democratic members who “feel like their vote doesn’t count, especially when they’re in cracked districts where no matter what they do, the Republican person will always get in office and always win. And they feel that the Republican doesn’t have to hear their concerns, because no matter what happens, they’re going to win, they’re going to get back in, so they don’t have to sit down, they don’t have to listen to our Democratic members or me as a Democrat[.]” *Id.* at 53:24-54:7.

597. Mr. Washington is a lifelong Democrat who votes in every general, special, and primary election. *Id.* at 56:3-11. His congressional representative in District 12 is Republican Representative Troy Balderson, who does not align with Mr. Washington's views, including as to the Affordable Care Act and reauthorizing Section 5 of the Voting Rights Act. *Id.* at 56:23-58:25.

598. The Affordable Care Act is particularly important to Mr. Washington, as it allowed his cousin's son to obtain necessary care for mental health issues. *Id.* at 57:3-9. The reauthorization of Section 5 of the Voting Rights Act is also especially important to Mr. Washington, as "after it was struck down, so many states implemented what we call voter suppression laws that disenfranchised communities of color, and it discouraged people from voting. And I believe that voting should be easier . . . So I take that personally." *Id.* at 57:10-18.

599. Mr. Balderson's predecessor under the current congressional district map, Congressman Pat Tiberi, also did not represent Mr. Washington's views. *Id.* at 58:15-59:2.

600. Mr. Washington testified that "because of the way these lines are drawn, the way they're so gerrymandered, that [my representatives] don't have to listen to me. They don't have to listen to my concerns." *Id.* at 59:10-12.

601. Mr. Washington's "vote is diluted" because in his district, "no matter what happens, Balderson was going to win, even when we had that big blue wave . . . no matter what's going on in our country, the Republican candidate will always win, and he doesn't have to listen to any of my concerns." *Id.* at 59:15-23, 60:7-11.

602. Under Plaintiffs' Proposed Remedial Plan, Mr. Washington would live in the Proposed Remedial District 12. *Id.* at 54:23-25; Trial Ex. P090, Cooper Decl. ¶ 33.

603. Stephanie White is also an APRI member, serving as vice president of APRI's Toledo chapter, having previously served as chapter secretary and treasurer. White, ECF No. 239 at 111:5-15. She resides in Sylvania, Ohio, which is in Lucas County near Toledo. *Id.* at 109:10-11, 109:16-17, 115:4-5.

604. Ms. White resides and votes in Ohio's 5th Congressional District, which is represented by Republican Congressman Bob Latta. *Id.* at 109:18-19, 110:10-13. She has never voted for Congressman Latta, but voted for his opponents in each congressional election since at least 2012, and also canvassed or handed out literature for his opponents in 2016 and 2018. *Id.* at 110:18-19, 112:17-24, 118:7-24.

605. Ms. White votes in all or nearly all elections, and has been registered as a Democrat since 1994. *Id.* at 112:3-113:5.

606. Ms. White usually votes for Democratic candidates, and has never voted for a candidate for U.S. Congress who was not a Democrat. *Id.* at 112:25-113:5. She feels that Democrats best represent her interests on issues that are especially important to her, including support for unions. *Id.* at 113:6-18. As a "proud UAW member," *id.* at 109:8-9, she feels that unions "bargain good contracts for the people, the companies we work for, and our employees get fair wages and fair benefits," *id.* at 113:6-12.

607. Representative Latta does not represent Ms. White's interests with regard to unions, as "he's Right to Work, pleasing Right to Work, which is totally against what unions are about." *Id.* at 113:19-24. He also does not represent her interests with regard to immigration and healthcare, two other issues of special importance to her. *Id.* at 113:6-8, 113:25-114:13.

608. "Lucas County is predominantly Democratic as a whole because it's a union area." *Id.* at 115:20-22. Though Ms. White is in Lucas County, District 5 is not representative

of the Lucas County community, but rather is “part of the Fulton County, Defiance, Williams County area, which is predominantly [a] Republican area.” *Id.* at 115:3-10.

609. As a result of District 5’s design, it is “very unlikely” that a candidate Ms. White supports could be elected to Congress from her district. *Id.* at 115:11-17. Rather, Ms. White’s vote is diluted and “overshadowed, and it doesn’t really count in that area.” *Id.* at 115:25-116:3; *see also id.* at 127:4-7 (“I feel like my vote isn’t counted”).

610. Representative Latta’s presence in Ms. White’s area of District 5 is “non-existent.” *Id.* at 116:11-13. Though Ms. White has met many elected officials at political events, including both Democrats and Republicans, *id.* at 116:17-19, 125:7-126:1, she has never met Representative Latta, though she would attend a town hall if he were to hold one, *id.* at 116:13-16, 116:23-117:1.

611. Representative Latta does not have a district office in the Toledo area, nor is Ms. White aware of any campaigning activity on his behalf in her area. *Id.* at 116:7-22.

612. Representative Marcy Kaptur represents the neighboring District 9 where Ms. White spends a great deal of time, but also is not “engaged enough” in the Toledo area, because the design of District 9 forces her “to spread her time between the Toledo area and all the area up to Cleveland.” *Id.* at 117:11-118:1. Ms. White has engaged in canvassing, phone banking, and handing out literature for Democratic candidates in both District 5 and her neighboring district, District 9. *Id.* at 118:20-119:2.

613. The 2011 congressional district map has “made it more time-consuming and harder” for Ms. White to conduct canvassing, phone banking, and voter mobilization efforts, both on behalf of APRI and with her union, UAW, “because we spend more of our effort trying

to convince people to vote and where their districts are, rather than just encourage them to register and getting them to the polls.” *Id.* at 119:3-11; *see also id.* at 119:14-19.

614. APRI’s voter registration drives, in which Ms. White takes part, are also rendered “more difficult” and “more time-consuming” in District 9 as a result of the congressional map’s division of the Toledo community, because “[i]f people are in [District 9] and they don’t know where the district is because they’re confused, it’s harder to have to spend that time trying to make sure they’re in the right area than it is to focus on them voting and them registering to vote[.]” *Id.* at 120:1-11.

615. Voter confusion in Ms. White’s area is common as a result of the current district map. *Id.* at 120:12-18, 126:13-18, 127:8-12. A district map that united Toledo and Lucas County would “make [APRI’s and Ms. White’s] work a lot easier.” *Id.* at 121:6-10.

616. Under Plaintiffs’ Proposed Remedial Plan, Ms. White would live in Proposed Remedial District 5. *Id.* at 109:10-11; Trial Ex. P090, Cooper Decl. ¶ 33.

C. The gerrymander has harmed the League of Women Voters of Ohio directly and through its members.

617. The League of Women Voters of Ohio (“The League”) is the Ohio chapter of the League of Women Voters of the United States. Miller, ECF No. 239 at 129:14-130:6.

618. The League’s mission is to “empower voters and . . . defend democracy,” in other words, “working to ensure that democracy works for every Ohio voter.” *Id.* at 130:7-11.

619. As part of that statewide work, among other things, the League hosts “public education forums” with candidates and “about how government works;” publishes educational materials including “*Know Your Ohio Government*” and publications “on redistricting;” and mobilizes volunteers for “voter registration” and for “getting out the vote.” *Id.* at 130:12-24; 131:11-21.

620. The League is a non-partisan organization. *Id.* at 133:22-24. According to its Executive Director, “there’s really no aspect of how [Ohio] democracy functions that [League members] aren’t playing a role, really a non-partisan role, to make sure that . . . government – it works for the people of Ohio.” *Id.* at 130:24-131:10.

621. The League has “[a]bout 2,800” members across the state of Ohio.” *Id.* at 133:1-2. This includes membership in “33 local leagues and . . . three at-large units . . . basically . . . 36 local communities across the state.” *Id.* at 133:3-19. Members live in “[a]ll 16” of Ohio’s congressional districts. *Id.* at 133:20-21; 136:11-13; 136:14-23; *see also* Trial Ex. P417, (LWVO Active Members for State).

622. One of the League’s top priorities is to achieve “[f]air maps;” to the League, “[f]air maps or fair districts means non-gerrymandered districts. It means . . . maps that are drawn by good public policy objectives, neutral criteria, and that are not – that are not designed to guarantee a 12-4 outcome, or any outcome for that matter.” Miller, ECF No. 239 at 137:1-138:2.

623. Working to preserve fair districts has been a priority for the League for most of its history. *Id.* at 138:10-17. The organization’s work on fair districts has included “work[ing] for decades trying to get reform through the legislature,” “circulat[ing] and get[ting] ballot initiatives on the ballot,” training and deploying “volunteers to go speak to community members about how maps are made and why they matter,” and publishing research and educational reports. *Id.* at 138:19-139:4.

624. As one of these efforts, the League co-lead a volunteer campaign to put Ballot Issue 1 on the May 2018 ballot, and pass it. *Id.* at 139:5-140:24; 153:11-19.

625. The League is particularly concerned about, and has committed significant resources to reforming, the 2012 map. *See, e.g., id.* at 171:22-172:22.

626. For instance, the League published a research report detailing the partisan intent and process behind the 2012 map. *Id.* at 154:19-156:14; Trial Ex. P359 (Ohio Redistricting Transparency Report). And it hosted a 2011 public map drawing competition to “help everyone understand that we could create neutral, objective, measurable goals, and then we could create a map based on those that would be fair.” Miller, ECF No. 239 at 156:21-157:8; *see also* Trial Exs. D46 (powerpoint presentation re mapmaking contest), D48 (competition rules and scoring).

627. The League joined this litigation by a vote of its Board, on behalf of its members. Miller, ECF No. 239 at 140:24-141:9. The Board voted to sue “[t]o bring a fair map to the people of Ohio by 2020.” *Id.*

628. The 2012 map diverts the League’s resources by making the organization “work a lot harder to do what [it] need[s] to do, to meet [its] mission.” *Id.* at 141:10-14. And the map harms the League’s “members who are Democrats whose votes are diluted and wasted.” *Id.* at 141:17-22; 158:21-159:16.

629. The League has three paid employees including its Executive Director and carries out most of its work via its members and volunteers. *Id.* at 133:25-134:9. Because the 2012 map is a gerrymander, those people spend the organization’s time, money, and energy fighting for fair districts and educating voters about how and where to vote, rather than on other parts of the League’s mission. *Id.* at 142:24-146:6. The map “creates so many problems at such a basic fundamental level that [the League] can’t even do some of [its] more transformative work.” *Id.*

630. The map’s confusing district lines result in voter confusion over where to vote; in the League’s voter registration and education work, “the number one question [they] get has to

do with who [voters'] representatives are.” *Id.* at 142:9-143:15. In the 2018 special election in District 12, for instance, the League fielded so many voter calls asking about where their districts were, League workers “basically had to pause everything [they] were doing to answer questions.” *Id.*

631. The 2012 map also produces “preordained election results” that cause voter apathy, making the League’s voter engagement and get out the vote efforts difficult. *Id.* at 146:7-18. The reliability of the map’s 12-4 partisan result also makes incumbent candidates unresponsive, undermining the League’s ability to hold bipartisan candidate forums in districts where representatives will not attend. *Id.* at 147:23-149:9; 190:1-17.

632. If the League didn’t “have to spend so much time” working against the confusion and apathy the map produces, it could “be in more schools” educating students, “do more forums,” “improve [its] voter guide,” and fulfill its mission by “making sure that voters are not just . . . participating, but are participating in a fully informed and engaged way.” *Id.* at 144:1-21; *see also id.* at 146:1-6. Beyond time and effort, the League has spent “an inordinate amount of [its] funds on dealing with gerrymandering.” *Id.* at 149:10-16; *see id.* at 149:11-154:12.

633. John Fitzpatrick is a member of the League through its Akron Area Chapter, and is a voter in Congressional District 14 where Democratic voters are cracked under the 2012 map. Fitzpatrick, ECF No. 239 at 197:4-17; 197:25-198:3; 219:21-220:6. He lives at 3435 Homewood Ave. in Stow, Ohio, a suburb of Akron. *Id.* at 197:7-14.

634. Mr. Fitzpatrick is a registered Democrat, and his District 14 Congressional Representative is David Joyce, a Republican. *Id.* at 197:17-23; *see also id.* at 201:16-25.

635. Mr. Fitzpatrick’s membership in the Akron Area League chapter makes him a dues-paying member of the Ohio and National Leagues. *Id.* at 198:8-20. The Akron club is the

closest local League chapter to his home, and “since [he] spend[s] most of [his] time in Akron, it’s the most logical club for [him] to participate in.” *Id.*

636. He is treasurer of the Akron chapter, and joined so he could “make a difference in – in how we all live in Akron and Summit County.” *Id.* at 199:3-18.

637. As a League member, Mr. Fitzpatrick works on the League’s programming in the Akron area including “candidate nights,” “putting out the voter guide,” putting on programs about issues and candidates” and “gathering signatures [and] participat[ing] in several educational sessions about the issue of gerrymandering and how to gather valid petitions.” *Id.* at 200:2-13; 206:8-18.

638. He and other members “spent the better part of the last couple of years going about and educating people about gerrymandering and how to . . . get it on the ballot.” *Id.* at 200:14-20; 207:17-24; 213:8-25. Most of his work is in the Akron area. *Id.* at 200:22.

639. Mr. Fitzpatrick has been a registered voter since he was first eligible to register in 1987, and votes “every chance [he] get[s].” *Id.* at 201:3-9. He votes because of his conviction that “[i]t’s important to participate in our democracy.” *Id.* at 201:10-15.

640. He has always been a Democrat. *Id.* at 201:16-25. He has always voted for a Democrat for U.S. Congress. *Id.* at 202:10-13; 203:24-204:10.

641. He has supported Democratic campaigns in his area, including contributing to District 14 congressional candidate Betsy Rader’s campaign in 2018, and canvassing and phone banking for Democratic candidates. *Id.* at 203:11-22.

642. Mr. Fitzpatrick lives in, does most of his political and League work in, and identifies with the Akron and Summit County area. *Id.* at 198:21-199:1. But the 2012 congressional map splits that area so that “there’s a little sliver of northern Summit County that

is part of” District 14. *Id.* at 205:1-8. There are four congressional districts that contain parts of Summit County. *Id.* at 209:4-9.

643. Mr. Fitzpatrick feels that his representative, Representative Joyce, is not responsive to him or his community. *Id.* at 205:1-13; 215:19-216:7. Representative Joyce’s policies are “detrimental” to the Akron area, and he is “much more focused on the rest of his district . . . [h]e just reflects the conservative nature of the rest of the district outside of Summit County.” *Id.* at 205:1-13. Mr. Fitzpatrick’s community is “on the fringe of” District 14. *Id.* at 216:2-3.

644. Despite being politically active, Mr. Fitzpatrick has never personally interacted with his representative, and has never seen him in his area. *Id.* at 205:15-206:4. This is because Mr. Fitzpatrick’s “community does not necessarily have the same issues and value the same things as the rest of the district does. So it’s not really in [Representative Joyce’s] self-interest to come and appear in [that] community.” *Id.*

645. Mr. Fitzpatrick, though passionate about the political process, “know[s] that by doing that [he is] not going to influence [his] local House seat, that just all [his] efforts are generally for naught.” *Id.* at 210:5-13. His Congressperson does not listen to him or his community because “[t]here’s no reason for him to moderate himself in order to even begin to appeal to [his] vote . . . there’s no reason in these heavily gerrymandered districts for people to moderate at all.” *Id.* at 210:14-23.

646. Through Mr. Fitzpatrick’s work with the League and on Democratic campaigns, he has also seen the voter confusion and apathy that the 2012 map produces. *Id.* at 207:25-208:25.

647. At a League chapter meeting at his local library, for example, Mr. Fitzpatrick remembers that “none of us traveled more than ten minutes, and we had three different congresspeople represent us in Congress.” *Id.* If he walks across the street from his house, he finds himself outside of District 14. *Id.* And when he drove to work near Akron, it was “hard to tell” how many districts he crossed each day. *Id.* This creates confusion among the voters he attempts to engage, and “frustration,” *id.*, which “leads to people . . . not participating as much in the system as they would otherwise,” *id.* at 210:1-4.

648. In attempting to canvass for Democratic campaigns like Betsy Rader’s, Mr. Fitzpatrick confronts “frustration with, Hey, we can get out and we can rally for Rader, but the numbers and the way the district is drawn is so far weighted the other way that our get out the vote efforts really don’t matter.” *Id.* at 209:14-25.

649. This confusion and apathy has harmed Mr. Fitzpatrick’s ability to organize successfully for Democratic candidates, and has burdened his work with the League. “It makes everything just that much harder.” *Id.* at 209:1-9.

650. Under Plaintiffs’ Proposed Remedial Plan, Mr. Fitzpatrick would live in Proposed Remedial District 16. *Id.* at 197:7-14; Trial Ex. P090, Cooper Decl. ¶ 33.

D. The gerrymander has harmed the Hamilton County Young Democrats directly and through its members.

651. Plaintiff Hamilton County Young Democrats (“HCYD”) is an all-volunteer, membership organization “that is devoted to getting young people involved and educated about politics.” Simon, ECF No. 240 at 64:23-24; 65:21-23; 66:13-14. HCYD holds educational and engagement events, partners with Democratic candidates, canvasses on behalf of candidates, including for Congress, and conducts voter registration drives. *Id.* at 66:14-18. HCYD meets at

the least once a month, and hosted over one hundred events in 2018, at which the Board and the members engage on various issues. *Id.* at 66:23-67:4.

652. Nathaniel Simon is the recent outgoing President of HCYD, a current member of the organization, and testified on its behalf. *Id.* at 64:13-65:2.

653. HCYD has approximately 100-150 members, who are interested in Democratic politics so signed up to join the organization. *Id.* at 65:3-10.

654. HCYD primarily conducts its work within Hamilton County but also partners with other Young Democratic chapters throughout the state. *Id.* at 66:19-22.

655. The members of HCYD are Democratic voters, who live in the First and Second Congressional Districts in Hamilton County. *Id.* at 67:5-7; 67:20-23. The organization is composed of young professionals who donate their time and money to support Democrats, so it would be “hard . . . to believe that they wouldn’t be Democrats supporting Democratic candidates and working within organization to further our cause.” *Id.* at 67:8-14.

656. Mr. Simon, a member of HCYD, is a registered Ohio voter, lives in the Second Congressional District, is a Democratic voter, and has voted for Democratic candidates for Congress. *Id.* at 62:2-13; 67:15-19.

657. Hamilton County Young Democrats has been burdened by the congressional district lines. *Id.* at 67:24-68:1.

658. The congressional district lines cause “a lot of confusion, and this causes [HCYD] to spend extra time and energy educating [its] members and public about which district they live in. [HCYD] also ha[s] to hold duplicative events and just volunteer, outreach -- it really complicates [its] efforts, especially as an all-volunteer organization.” *Id.* at 68:6-11.

659. While canvassing for Democratic candidates for Congress in the First and Second Congressional Districts, Mr. Simon observed apathy and confusion throughout the Districts. *Id.* at 68:12-16; 68:22-69:1. He testified that, while knocking on doors “it was really common that people would just refuse to engage in politics because they felt like there was no point, just being that a Republican is always going to win with the way the lines are drawn.” *Id.* at 68:17-21.

660. Mr. Simon also observed the impact of the apathy and confusion created by the district lines upon HCYD volunteers. *Id.* at 69:2-4. Volunteers would return from canvassing demoralized and frustrated by the apathy they encountered. *Id.* at 69:4-7. People that HCYD “interacted with refused to get involved because of how the district lines were drawn, knowing that the map favors Republicans and disfavors Democrats.” *Id.* at 69:11-13.

661. Mr. Simon also personally observed potential members decline to remain involved with HCYD due to the impact of the district lines. *Id.* at 69:14-17. He testified that “new people come to our events all the time, but it’s really hard to retain them, especially just with the apathy and confusion regarding the lines and how there is no opportunity to get somebody that reflects our views elected to Congress.” *Id.* at 69:17-21.

662. As drawn, the district lines have burdened HCYD with respect to voter education. *Id.* at 69:22-24. The way “Congressional District 1 and Congressional District 2 wrapping around each other,” and “[m]ost notably, city of Cincinnati is split between the two districts,” *id.* at 63:20-23, causes confusion, *id.* at 68:6. Mr. Simon testified about “a specific time where [he] was working at a poll in Silverton, and many people who came out of the polling booth asked why wasn’t Aftab Pureval on [their] ballot.” *Id.* at 69:24-70:1. He “had to explain to them that they are in the 2nd Congressional District, but to the east and west of Silverton is the 1st Congressional District.” *Id.* at 70:2-4. He also testified to observing “in [his] neighborhood,

which is in the 2nd Congressional District, there were Aftab Pureval signs, and he is the candidate for the 1st District. It is just widespread confusion.” *Id.* at 70:4-7.

663. The confusion caused by the congressional district lines requires extra work of HCYD. *Id.* at 75:22-76:17. Mr. Simon explained that, for its members, HCYD has to “to look up their own individual address to determine which district they live in. There is absolutely no clear way to say you live in the city of Cincinnati, you live in Congressional District 1.” *Id.* at 76:1-4. HCYD has “members who live on one side of the street and they’re in Congressional District 1 and on the exact opposite side they live in Congressional District 2,” which “is extremely confusing, especially how they wrap around each other.” *Id.* at 76:5-8. While HCYD is able to find this information for their members, the level of confusion plus the shape of the district lines demands “extra work on [its] part,” whereas with Plaintiffs’ Proposed Remedial Plan, HCYD could identify “very easily that if you live in the city of Cincinnati or west of I-71, excluding Symmes Township, you live in Congressional District 1” and “wouldn’t even have to look up somebody’s address.” *Id.* at 76:9-17.

664. In addition to voter confusion, the congressional lines have burdened HCYD’s ability to advocate for its positions. *Id.* at 70:8-10. Mr. Simon testified that he “feel strongly that there’s strength in numbers, and with it being tougher to attract and retain members, it makes it tougher to advocate for our positions and for our candidates due to the lines.” *Id.* at 70:10-13.

665. Mr. Simon testified that the votes of the members of HCYD are “less meaningful,” and that “[his] vote as a Democrat is not equal to [his] neighbor’s vote if they are Republican, and this is because with the current lines, the outcome is predetermined.” *Id.* at 68:3-6.

666. Due to the gerrymandered lines, HCYD and its members are not represented by their Congressmen. *Id.* at 70:14-16. Mr. Simon testified about “an event that [HCYD] held following the Parkland shooting . . . regarding gun violence.” He testified about “Two main things that came from the event was people were confused about which district they lived in, so we had to look up their district for each individual person. There was no clear way to say, ‘You live in Cincinnati, you’re in the first Congressional District.’ The second thing was there’s no opportunity to engage our representatives on this important issue because they are, with the gun lobby, both of the congressmen who make up or represent Hamilton County are not aligned with us on that issue.” *Id.* at 70:16-71:1. From Mr. Simon’s observation, Representative Chabot and Wenstrup “don’t need to be responsive because they are safe.” *Id.* at 72:2. Mr. Simon is aware of the bill sponsored by Representative Chabot following the Parkland shooting, but found it was not responsive to the concerns of HCYD, and testified, “To my knowledge, that was not a gun control bill, and he has an A rating with the NRA.” *Id.* at 80:5-9; *see also id.* at 81:5-16.

667. Members of HCYD have contacted Representatives Chabot and Wenstrup and not received replies. *Id.* at 71:2-5. Mr. Simon has contacted the Congressmen representing Hamilton County on a number of occasions and not received replies. *Id.* at 71:2-72:2. Mr. Simon testified that “previously, [he] was a legislative aide for an Ohio House of Representative, Democratic Ohio House of Representative, and [he] currently work[s] at the county level for a Democrat, Democratic-elected official. In both roles, constituent case work is a large part of [his] job, and just trying to help constituents solve their issues, [he] ha[s] tried to contact both [Representative Chabot’s and Representative Wenstrup’s] offices; oftentimes never receiving a reply, not even from a staffer.” *Id.* at 71:6-15. He further testified that these efforts were “extremely frustrating, just because that’s my job to help our constituents regardless of partisan

affiliation, and to not even receive a response is quite insulting. And I strongly feel that it's because the way the lines are drawn, these representatives do not need to be responsive to their constituents because their reelection is guaranteed." *Id.* at 71:16-21. Mr. Simon has also contacted his representative in his personal capacity and not received any reply. *Id.* at 71:22-72:2.

668. Mr. Simon testified that the lines between District 1 and 2 in the current congressional map have caused the outcome of the elections to be locked in. He testified that "prior to the current map that's in place, a Democrat was able to get elected, and this was in 2008 with Steve Driehaus. But since the lines have been redrawn, no Democrat has been elected, and this is despite a county that has grown more blue. For instance, for the first time in Hamilton County's history, the Board of Commissioners is all Democrats. That has never happened before. Also, on election night, [Mr. Simon] watched the news and there was an interview with Steve Chabot, and he said he knew . . . he would have trouble getting votes in urban areas and in the city of Cincinnati, but he knew he would win because he had Warren County. That just speaks to the lines and how it guarantees the outcome of a Republican winning." *Id.* at 72:3-24. Mr. Simon also looked at the congressional vote totals in Hamilton County following the 2018 congressional election, and "just looking to Hamilton County, residents voted outnumbering Republicans." *Id.* at 72:25-73:3; *see also* Trial Ex. J21, Official 2018 General Election Results (within Hamilton County, 185,031 votes for Democratic candidates for Congress, 150,404 votes for Republican candidates for Congress).

669. Mr. Simon testified that he believed that under Plaintiffs' Proposed Remedial Plan, there could be "the actual possibility" "that a Democrat could win." Simon, ECF No. 240 at 73:4-5. He testified that the Plaintiffs' Proposed Remedial Plan could alleviate the burdens on

HCYD caused by the current congressional map as “it clears up a lot of confusion on where people reside, in which district. I can say looking at this map that if you live in the city of Cincinnati or if you live to the west of I-71, excluding Symmes Township, you live in the 1st Congressional District. That clears up a lot of confusion. Also, I think there is actual opportunity with this map for somebody other than a Republican to get elected.” *Id.* at 73:12-24. Under Plaintiffs’ Proposed Remedial Plan, the percentage of the two-party vote for the Democratic candidate in District 1 was over 57% based on 2018 election results. Trial Ex. P598, Cooper Third Supplemental Decl. ¶ 5, fig.1.

670. Mr. Simon testified that while it is the role of HCYD as an advocacy organization to do work to engage people, “with the way the lines are currently drawn, we have to spend extra time educating people, extra resources doing events. It’s just more than what is normal.” Simon, ECF No. 240 at 73:6-11.

671. Under Plaintiffs’ Proposed Remedial Plan, Mr. Simon, and all of the members of HCYD who live in Cincinnati, would live in the Proposed Remedial District 1. *Id.* at 63:1-3, 67:20-23; Trial Ex. P090, Cooper Decl. ¶ 33.

E. The gerrymander has harmed the Northeast Ohio Young Black Democrats directly and through its members.

672. Plaintiff Northeast Ohio Young Black Democrats (“NEOYBD”) is a regional organization dedicated to “mentor, empower and recruit the next generation of young people of color who want to be involved in the political process” in Northeast Ohio. Jackson Dep., ECF No. 230-22 at 8:9-12. Gabrielle Jackson is the President of NEOYBD and testified on its behalf. *Id.* at 7:12-14.

673. NEOYBD is a Democratic organization that supports Democratic candidates for all offices for which their membership is eligible to vote including the U.S. House of

Representatives. *Id.* at 14:6-10. It is a chapter of the Ohio Young Black Democrats. *Id.* at 28:18-20.

674. NEOYBD has about sixty members, all Democrats and regular voters, who currently live in Ohio Congressional Districts 9, 11, 13, and 14. *Id.* at 26:5-11; 40:25-41:18; 44:12-18.

675. Central to NEOYBD's mission is "voter education, training, and information-sharing," including "informing voters on important issues and candidates in ways that they can get involved." *Id.* at 8:17-18, 8:21-22.

676. This includes canvassing, phone banking, and social media engagement to get out the vote and support Democratic issues in Northeast Ohio communities. *Id.* at 9:2-15. It also includes training other Democrats and progressives on organizing tools including fundraising and running for office, and holding events to support Democratic candidates. *Id.* at 12:5-14:10.

677. For example, in 2018, NEOYBD, through its board, members, and volunteers, held four training events to educate people about organizing for Democratic candidates, *id.* at 12:16-17, monthly phone banks to support Democratic candidates, *id.* at 19:21, and regular canvassing including in conjunction with other Democratic groups for the same purpose, *id.* at 16:8-23.

678. NEOYBD supported Ballot Issue 1 and canvassed to get it on the ballot in 2017. *Id.* at 34:12-35:19.

679. NEOYBD's board unanimously voted to become a plaintiff in this litigation. Based on the "conversations we've had with our community," the board believed "[t]he current map does not represent us, and we don't have a fair, equal voice." *Id.* at 39:7-17.

680. Ohio's gerrymandered congressional map forces NEOYBD to divert resources from its mission work by making it more difficult to get out the vote and keep Democratic voters engaged. Ms. Jackson testified, "So, for instance, we have a member that lived in Lake County. We are the Northeast Ohio Young Black Democrats. And the amount of enthusiasm and willingness to get involved and make their voices heard in that area, because it is a cracked district, is not where it needs to be. And so we've had to spend extra resources trying to build momentum, trying to get information out there because of the way that that district is drawn and the way that the map is drawn in our region." *Id.* at 10:19-11:13.

681. Ms. Jackson has personally experienced working against voter apathy and confusion. *Id.* at 7:12-8:6; 46:10-24.

682. The voter apathy that the map produces makes it more difficult for NEOYBD to fundraise and get members involved. Ms. Jackson testified, "[W]e also have to fundraise for our organization itself. And it's been challenging based on the way this map is currently drawn, because folks have been feeling like, you know, there [sic] voices aren't being heard. So it's causing us to use more of our resources, when we have a hard time bringing in resources." *Id.* at 23:17-24.

683. NEOYBD's membership itself is harmed by the voter apathy and confusion that the map creates: "why would [members] join the organization? Why would they get involved? Why would they talk to their neighbors about us? Because they feel their vote doesn't count." *Id.* at 87:2-6.

684. Ms. Jackson, the President of NEOYBD for the past two years, lives in Ohio's Ninth Congressional District. *Id.* at 7:12-8:6. She has personally experienced working against voter apathy and confusion in the packed district where she lives: "It's also known as the Snake

on the lake. My representative is Congresswoman Marcy Kaptur. I live in Lakewood, Ohio. She lives in Lucas County. And it's literally a thin line – the way this current map is drawn, it's literally a thin line that goes along Lake Erie. There's no adequate way for me, living on the west side of Cleveland to be represented the same as someone living in Lucas County. That's what I mean when I say that our voices aren't really being counted, our voices aren't being heard, and we don't have a direct connect to our congressional representative.” *Id.* at 46:10-24.

685. But for the gerrymandered congressional map, NEOYBD could spend more of its resources more effectively to get out the vote, fundraise, and otherwise support Democratic candidates. *Id.* at 48:22-49:22; 55:13-15; 64:18-65:3; 69:3-70:2; 74:8-24; 83:22-84:13; 85:14-86:6; 86:18-87:6.

F. The gerrymander has harmed The Ohio State University College Democrats directly and through its members.

686. The Ohio State University College Democrats (“OSU College Democrats”) is a student organization at The Ohio State University whose aim is to “advocate, educate, and engage people on the Ohio State campus in alignment with the [Democratic] party platform.” Oberdorf Dep., ECF No. 230-38 at 13:12-19.

687. OSU College Democrats is a membership organization made up of OSU students who self-identify as Democrats. *Id.* at 119:3-6.

688. Students who have attended at least thirty percent of the meetings in a year are “voting members” of the organization. *Id.* at 45:20-46:13.

689. OSU College Democrats does not know who each of its members has voted for, but has no concern that the organization is infiltrated by non-Democrats. *Id.* at 119:7-16.

690. The members of OSU College Democrats generally live in the Third, Twelfth or Fifteenth Congressional Districts. *Id.* at 66:4-13. While some members are registered to vote at

their home address, the bulk of the members are registered to vote at their school address. *Id.* at 66:14-67:2.

691. OSU College Democrats does voter engagement and education, works to register students to vote for the first time or to have them update their voter registration to their current address, canvasses on behalf of candidates including for Congress, hosts events with Democratic candidates, including for congressional office, and has done phone banking, including on behalf of the Democratic coordinated campaign which works on behalf of, among other offices, congressional candidates. *Id.* at 78:13-81:2; 87:21-89:11; Ex. 5 to Oberdorf Dep., ECF No. 180-5 at 4-5, 7-11.

692. The members of OSU College Democrats support Democrats running for office, including for Congress. For example, the Danny O'Connor campaign for Congress in the Twelfth Congressional District was a key focus for 2018. Oberdorf Dep., ECF No. 230-38 at 85:19-86:3; 87:23-88:17; 113:25-114:15; 119:7-16.

693. The “small executive board” makes decisions for OSU College Democrats, including the vote to join this lawsuit. *Id.* at 53:24-54:5; 58:15-59:2.

694. The votes of the members of the OSU College Democrats have been diluted due to the construction of the Third, Twelfth, and Fifteenth Congressional Districts. *Id.* at 64:5-16; 65:16-23.

695. OSU College Democrats and its members have found that the Congresspeople representing the Third, Twelfth, and Fifteenth Congressional Districts are not responsive to them. *Id.* at 103:14-104:13

696. By diluting the members' votes, the congressional map, and specifically the construction of the Third, Twelfth, and Fifteenth Congressional Districts, impairs OSU College Democrats ability to carry out its purpose. *Id.* at 65:2-10; 75:2-20; 103:4-13; 118:18-119:2.

697. Because the larger constituency of young voters is split up across these three districts, it impairs their effectiveness as a voting bloc. *Id.* at 117:21-118:17.

698. The way the lines are drawn burdens OSU College Democrats and its members by creating confusion about which district someone lives in. *Id.* at 63:16-64:4; 68:5-69:17.

699. This voter confusion causes young voters to become frustrated and less likely to be or remain engaged with OSU College Democrats. *Id.* at 81:16-25.

700. This was illustrated in summer 2018 during the Twelfth District Special Election. Many individuals who engage with OSU College Democrats were confused about whether they were supposed to vote on Special Election Day, and OSU College Democrats had to expend its volunteer resources to engage with these voters, instead of on Get Out the Vote activity directed only at the Twelfth District. *Id.* at 63:16-25; Oberdorf Dep. Ex. 5, ECF No. 180-5 at 11.

701. The locked-up nature of the congressional map causes members of the OSU community to believe that their votes do not matter and to become apathetic. Oberdorf Dep. at ECF No. 230-38 at 62:17-63:15; 69:18-25; 70:5-71:4; 117:17-118:20.

702. The apathy from young voters caused by the map impairs OSU College Democrats' associational rights. *Id.* at 62:17-63:6; 117:15-20.

703. OSU College Democrats is concerned about congressional redistricting, and has held events and collected petition signatures for the fair districting initiative. *Id.* at 55:6-22.

704. In 2018, OSU College Democrats focused their resources on the Danny O'Connor campaign, both the Special Election and on the November 2018 General Election. *Id.* at 85:19-86:3; 87:21-88:17; 113:25-114:15.

705. Mr. O'Connor did not win the November 2018 election despite a massive percentage shift for the Democratic candidate. *Id.* at 63:9-10; 114:19-24; 117:4-14.

706. Under Plaintiffs' Proposed Remedial Plan, the percentage of the two-party vote for the Democratic candidate in District 12 was over 54% based on 2018 election results. Trial Ex. P598, Cooper Third Supplemental Decl. ¶ 5, Fig. 1, ECF No. 177-8.

IV. Extensive Expert Evidence Supports Findings of Partisan Intent, Partisan Effect, and Causation.

A. Dr. Christopher Warshaw

1. Qualifications

707. Dr. Christopher Warshaw graduated *magna cum laude* from Williams College. Warshaw, ECF No. 240 at 181:11-18. He holds a Ph.D. in political science from Stanford University and a J.D. from Stanford Law School. *Id.* Professor Warshaw was a tenure-track assistant professor and an associate professor at the Massachusetts Institute of Technology. *Id.* at 182:18-183:7; Trial Ex. P571, Warshaw CV at 57. Since 2017, he has been a tenure-track assistant professor of Political Science at the George Washington University. *Id.* He teaches both undergraduate and graduate courses at the University. Warshaw, ECF No. 240 at 183:13-21; Trial Ex. P571, Warshaw CV at 57. Dr. Warshaw teaches political science, including courses specifically focused on elections, public opinion, statistical methodology, and political representation. Warshaw, ECF No. 240 at 183:13-21.

708. Dr. Warshaw has conducted extensive research in political science. *Id.* at 181:19-182:5. His research interests focus on elections, public opinion and representation, and the link

between public opinion and outcomes. *Id.* at 183:22-184:4. His research often includes statistical analysis. *Id.* at 182:6-8, 188:7-11. Professor Warshaw's research publications include over 20 peer-reviewed articles, including in the top three journals in political science, and six book chapters or Law Review articles. *Id.* at 184:19-188:24. He has served on the editorial board of the Journal of Politics and as a peer reviewer for many other journals. *Id.* at 188:25-189:12. He was on the executive board of the Urban Politics Association of the American Political Science Association. *Id.* at 189:14-20. He has given invited talks at BYU, University of Virginia, UCLA, Washington University in St. Louis, Yale, Columbia, Duke, Princeton, Boston University, and other institutions. Trial Ex. P571, Warshaw CV at 57-62.

709. Dr. Warshaw has been accepted as an expert in several cases. In *League of Women Voters of Pennsylvania v. Commonwealth of Pennsylvania*, the Pennsylvania trial court accepted Dr. Warshaw as an expert in American politics. 178 A.3d 737, 777 (Pa. 2018). The trial court found "Dr. Warshaw's testimony to be credible, particularly with respect to the existence of an efficiency gap in Pennsylvania." *Id.* at 778. The trial court rejected the opinion of an expert witness who criticized Dr. Warshaw's testimony. *Id.* at 781. Dr. Warshaw has also been found credible in *New York v. United States Department of Commerce*. "The Court f[ound] that Dr. Warshaw's calculations are credible and persuasive." *New York v. U.S. Dep't of Commerce*, 351 F. Supp. 3d 502, 594 (S.D.N.Y. 2019). Dr. Warshaw was also allowed to testify as an expert in *League of Women Voters of Michigan v. Benson*. Warshaw, ECF No. 240 at 190:1-15.

2. *Ohio's map had the effect of advantaging Republicans.*

710. Republicans won 12 (75%) of Ohio's U.S. congressional seats in 2012 with 51% of the congressional vote. Warshaw, ECF No. 240 at 200:5-17; Trial Ex. J17, Official Secretary

of State Election Return Data for 2012 General Election (illustrated in Demonstrative Trial Ex. PD73).

711. Republicans won 12 (75%) of Ohio's U.S. congressional seats in 2014 with 59% of the congressional vote. Warsaw, ECF No. 240 at 200:5-17; Trial Ex. J18, Official Secretary of State Election Return Data for 2014 (illustrated in Demonstrative Trial Ex. PD73).

712. Republicans won 12 (75%) of Ohio's U.S. congressional seats in 2016 with 57% of the congressional vote. Warsaw, ECF No. 240 at 200:5-17; Trial Ex. J19, Official Secretary of State Election Return Data for 2016 (illustrated in Demonstrative Trial Ex. PD73).

713. Republicans won 12 (75%) of Ohio's U.S. congressional seats in 2018 with 52% of the congressional vote. Warsaw, ECF No. 240 at 200:5-17; Trial Ex. J21, Official Secretary of State Election Return Data for 2018 (illustrated in Demonstrative Trial Ex. PD73).

714. Democrats won only four (25%) of Ohio's U.S. congressional seats in 2012 although they obtained 47% of the congressional vote. Warsaw, ECF No. 240 at 200:5-17; Trial Ex. J17, Official Secretary of State Election Return Data for 2012 General Election (illustrated in Demonstrative Trial Ex. PD73).

715. Democrats won only four (25%) of Ohio's U.S. congressional seats in 2014 although they obtained 39% of the congressional vote. Warsaw, ECF No. 240 at 200:5-17; Trial Ex. J18, Official Secretary of State Election Return Data for 2014 (illustrated in Demonstrative Trial Ex. PD73).

716. Democrats won only four (25%) of Ohio's U.S. congressional seats in 2016 although they obtained 41% of the congressional vote. Warsaw, ECF No. 240 at 200:5-17; Trial Ex. J19, Official Secretary of State Election Return Data for 2016 (illustrated in Demonstrative Trial Ex. PD73).

717. Democrats won only four (25%) of Ohio's U.S. congressional seats in 2018 although they obtained 47% of the congressional vote. Warshaw, ECF No. 240 at 200:5-17; Trial Ex. J21, Official Secretary of State Election Return Data for 2018 (illustrated in Demonstrative Trial Ex. PD73).

3. Test for determining when partisan gerrymandering has occurred

718. Dr. Warshaw testified that a four-part test can be used to determine when partisan gerrymandering has occurred. The elements are: (1) if one party controlled the redistricting process, (2) if partisan bias metrics indicate that the same party is advantaged, (3) the map is an outlier in partisan bias metrics, and (4) all of the partisan bias metrics point in the same direction. Warshaw, ECF No. 240 at 191:13-192:12. Each element has been met in the case of Ohio. *Id.* at 245:20-21.

4. One party control

719. The first element, one party control, is met in Ohio. According to Dr. Warshaw one element that political scientists consider when determining whether partisan gerrymandering has occurred is whether one party controlled the redistricting process. *Id.* at 192:13-195:3. Political scientists do not consider the votes for the actual bill, but rather what party had a majority. *Id.* at 194:5-195:3. Political scientists look at control rather than votes because the party with control, *i.e.*, in the majority, "has the power to pass a plan, regardless of whether minority legislators support it. So there's any number of idiosyncratic reasons why some of the minority party might support a particular redistricting plan." *Id.* at 194:16-21. Further, political scientists expect "some minority members to vote for it, either for idiosyncratic reasons because the bill was packaged with other bills, or for reasons of trying to carve out something in their own district." Warshaw, ECF No. 241 at 112:17-20. The individual votes of a minority party member or members alone is not sufficient to cancel out the fact that the primary purpose of the

majority party was to “maximize their seat share” by gerrymandering. Warshaw, ECF No. 240 at 192:13-195:3.

720. Dr. Warshaw’s view on the importance of one-party control is based on analytical research. He has conducted research to look at the relationship between a change in the efficiency gap, one of the measures of partisan bias or partisan advantage, and one-party control of redistricting. *Id.* at 193:6-25. His research shows that in states with more than six congressional seats and where Republicans controlled the redistricting process in 2011, the efficiency gap shifted in a pro-Republican direction from 2010 (prior to redistricting) to 2012 (after the redistricting). *Id.*; *see also* Trial Ex. P571, Warshaw Report at 17-18. Dr. Warshaw’s research shows that “on average the efficiency gap shifted about 11 percent in favor of Republicans.” Warshaw, ECF No. 240 at 193:14-25.

721. Ohio meets the test for one party control. Republican John Kasich was the Governor and Republicans held the majority in both the Ohio House of Representatives and Senate. *See supra* Section II.A.2; Hood, ECF No. 247 at 183:9-22.

5. Partisan bias metrics in Ohio

722. Dr. Warshaw’s report includes a discussion of five different partisan bias metrics: (1) the efficiency gap, (2) mean-median difference, (3) declination, (4) asymmetry metric and (5) asymmetry 50-50. Warshaw, ECF No. 240 at 196:20-197:15; Trial Ex. P571, Warshaw Report. Partisan bias is “the idea of trying to quantify whether one party or another has an advantage in the translation of votes to seats” in the legislature. Warshaw, ECF No. 240 at 195:22-25.

723. According to Dr. Warshaw the benefit of looking at these five metrics is that “looking at a suite of different metrics . . . gives us greater confidence in any conclusion that we were to draw.” *Id.* at 197:9-15. In order for this suite of metrics to be informative they must point in the direction of the party in control of redistricting (in this case the Republican party),

they must all point in the same direction (in this case suggest a pro-Republican bias), and on average the measures must be extreme.

724. In order to calculate the partisan bias metrics for Ohio, Dr. Warshaw used a data set of all elections from 1972 to 2018 of states with at least six congressional seats. *Id.* at 197:16-24; Warshaw, ECF No. 241 at 45:14-18. His data set included over 500 elections. Warshaw, ECF No. 240 at 202:25-203:10.

725. He primarily used congressional elections as his data source since “given that the target of a gerrymander is congressional elections. . . it makes the most theoretical sense to focus on congressional election results.” *Id.* at 198:1-13. However, since voters typically vote similarly in congressional and statewide elections, it would have made little difference if he used another election. Trial Ex. P571, Warshaw Report at 6-7, n.5; *see also* Warshaw, ECF No. 240 at 198:9-13.

726. The first measure studied by Dr. Warshaw is the efficiency gap. See generally Warshaw, ECF No. 240 at 207:16-221:25. The efficiency gap is “a way to mathematically capture the packing and cracking that is the heart of gerrymandering.” *Id.* at 207:16-208:8. Packing is putting “as many as possible of the disadvantaged party’s supporters into a small number of districts.” *Id.* Cracking is putting “the remaining voters across a large number of districts.” *Id.* The efficiency gap is defined as “the difference between the parties’ respective wasted votes, divided by the total number of votes cast in the election.” Trial Ex. P571, Warshaw Report at 6. In the efficiency gap you measure the number of wasted votes, which are both the votes over and above the number needed to win (50%+1) and all of the votes for the losing party. *Id.* at 6-7.

727. The efficiency gap can be pro-Republican or pro-Democrat. *Id.* at 6. A pro-Republican efficiency gap is denoted with a negative number and a pro-Democrat with a positive number. *Id.*

728. Ohio had a pro-Republican efficiency gap in every election held under the map. Warsaw, ECF No. 240 at 214:10-215:23. There was a dramatic increase Ohio's efficiency gap from 2010 to 2012. *Id.* Ohio's pro-Republican efficiency gap was -22.4% in 2012, -9% in 2014, -8.7% in 2016, and -20% in 2018. *Id.*; Trial Ex. P571, Warsaw Report at 21-23; Trial Ex. P476, Warsaw 2018 Update Report at 2-3.

729. Ohio's efficiency gaps are extreme outliers in the universe of over 500 elections. "The 2012 efficiency gap in Ohio was more extreme than 98% of previous plans in states with more than six seats over the past 45 years, and it was more Republican-leaning than 99% of previous congressional districting plans." Trial Ex. P571, Warsaw Report at 23; *see also* Warsaw, ECF No. 240 at 217:21-218:9. The 2018 efficiency gap in Ohio was -20%. This was more extreme than 96% of previous plans in states with more than six seats over the past 45 years, and it was more Republican-leaning than 98% of previous congressional districting plans. Trial Ex. P476, Warsaw 2018 Update Report at 3.

730. The mean-median gap is the difference between a party's vote share in the median district and their average vote share across all districts. Trial Ex. P571, Warsaw Report at 8-10. If a party wins more votes in the median district than in the average district, they have an advantage in the translation of votes to seats. *Id.* at 8; *see also* Warsaw, ECF No. 240 at 222:6-224:21.

731. Ohio has a mean-median gap in all four elections, which shows an advantage for Republicans in the congressional election. Trial Ex. P571, Warsaw Report at 24-25. Ohio's

2012 mean-median gap of 7.8% was a sharp increase from Ohio's mean-median gap in 2010, which was 1.7%. *Id.* The mean-median difference in 2012 was larger than in 83% of previous elections and more pro-Republican than the mean-median difference in 92% of previous congressional elections. *Id.*; *see also* Trial Ex. P572, Warshaw Rebuttal Report at 5. Ohio had a gap between the mean and median district of 5.0% in 2018. Trial Ex. P476, Warshaw 2018 Update Report at 3. Ohio's mean-median gap in 2018 was more extreme than the mean-median difference in 62% of previous elections and more pro-Republican than the mean-median difference in 81% of previous elections. *Id.*

732. The declination metric treats asymmetry in the vote distribution as indicative of partisan bias in a redistricting plan. Trial Ex. P571, Warshaw Report at 12-13. If all the districts in a plan are lined up from the least Democratic to the most Democratic, the mid-point of the line formed by one party's seats should be about as far from the 50 percent threshold for victory on average as the other party's victory. *Id.*

733. The declination metric can be quantified using a number between -1 and 1 (positive values favor Democrats and negative values favor Republicans.). *Id.* at 25.

734. All four declination metrics in the last four election cycles show a pro-Republican advantage. *Id.* at 25-26.

735. The declination measure became much more pro-Republican in 2012 after redistricting. Warshaw, ECF No. 240 at 231:23-232:12.

736. The 2012 congressional election in Ohio had a more extreme declination than 99% of previous elections and a more pro-Republican declination than any previous U.S. congressional election over the past 45 years. Trial Ex. P571, Warshaw Report at 25-26; *see also* Trial Ex. P572, Warshaw Rebuttal Report at 5.

737. Ohio's 2018 congressional election had a declination score of -0.69. Trial Ex. P476, Warshaw 2018 Update Report at 3. This was more extreme than 98% of previous elections and more pro-Republican than 99% of previous U.S. congressional elections. *Id.*

738. The symmetry metric captures whether each party receives the same share of seats for identical shares of votes. Trial Ex. P571, Warshaw Report at 10-12.

739. Gelman and King propose two ways to measure partisan bias in the symmetry of the vote-seat curve. First, it can be measured using counter-factual election results in a range of statewide vote shares between .45 and .55. Across this range of vote shares, each party should receive the same number of seats when they obtain the same vote share. The symmetry measure captures any departures from the standard that each party should receive the same seat share across this range of plausible vote shares. Second, symmetry can be measured based on the seat share that each party receives when they split the statewide vote 50-50. In an unbiased system, each party should receive 50% of the seats in a tied statewide election. Here, the partisan bias statistic is the "expected proportion of the seats over 0.5 that the Democrats receive when they receive exactly half the average district vote." *Id.* at 11.

740. Both partisan symmetry measures indicate a pro-Republican advantage in all four elections under the map. *Id.* at 26-27.

741. Measure 1: Based on the standard that each party should receive the same seat share across a range of plausible vote shares, the asymmetry between Democrats and Republicans was more extreme than 96% of previous elections and more pro-Republican than 97% of previous U.S. congressional elections over the past 45 years. *Id.*; *see also* Trial Ex. P572, Warshaw Rebuttal Report at 5.

742. Measure 2: In hypothetically tied statewide elections, the level of bias in Ohio's 2012 election was more extreme than 96% of previous elections and more pro-Republican than 97% of previous U.S. congressional elections over the past 45 years. Trial Ex. P571, Warshaw Report at 26-27; *see also* Trial Ex. P572, Warshaw Rebuttal Report at 5.

743. Measure 1: Ohio's 2018 elections were more asymmetric than 92% of previous elections and more pro-Republican than 94% of previous U.S. congressional elections over the past 45 years. Trial Ex. P476, Warshaw 2018 Update Report at 3-4

744. Measure 2: The level of bias in 2018 was more extreme than 95% of previous elections and more pro-Republican than 96% of previous U.S. congressional elections over the past 45 years. Trial Ex. P476, Warshaw 2018 Update Report at 3-4.

745. Dr. Warshaw also assessed the Proposed Remedial Plan using these same metrics and found "very little partisan bias in the remedial map." Warshaw, ECF No. 241 at 17:2-18:8; Trial Ex. P476, Warshaw 2018 Update Report at 14-15; Trial Ex. P572, Warshaw Rebuttal Report at 12-13.

6. Responsiveness metrics in Ohio

746. In addition to measuring partisan bias, Dr. Warshaw also measured responsiveness. Responsiveness captures "how likely the election results are to change due to changes in the voter preferences." Warshaw, ECF No. 240 at 201:14-22. An unresponsive map ensures that the bias in a districting plan toward the advantaged party is insulated against changes in voters' preferences, and thus is durable across multiple election cycles. Trial Ex. P571, Warshaw Report at 14-16.

747. Dr. Warshaw used two metrics to measure responsiveness in Ohio. Warshaw, ECF No. 240 at 202:3-24. First he looked at the number of competitive elections. Then he ran the King and Gelman uniform swing analysis. *Id.* To perform uniform swing analysis, a

political scientist looks at a range of vote shares and adds on percent to calculate the expected seat share that a party will gain. *Id.* To calculate the metrics, he used the same data source of 500 plus elections as he used to calculate the partisan bias metrics. *Id.* at 202:25-203:10.

748. Ohio's congressional elections grew less competitive after the 2011 plan went into place. Trial Ex. P571, Warshaw Report at 28-30. Out of 64 elections held under the map, only five have been competitive. Warshaw, ECF No. 240 at 251:1-252:12. None of Ohio's congressional elections were competitive in 2014 and 2016, meaning no candidate won their election by less than 55%. *Id.*; Trial Ex. P571, Warshaw Report at 28-30. In 2018, Ohio had only two competitive elections, meaning the candidates won their elections by less than 55%. Trial Ex. P476, Warshaw 2018 Update Report at 11.

749. Gelman and King propose a technique that measures responsiveness based on uniform swings in two parties' counterfactual vote shares. Trial Ex. P571, Warshaw Report at 15-16. The responsiveness of a map indicates how many seats change hands as vote shares rise and fall. *Id.* at 14-16. Ohio's post-2011 districting plans had some of the least responsive election results in the country. *Id.* at 28-30. Performing a uniform swing analysis based on the 2018 election results, Republicans win 75% of the seats across most of the range of plausible election swings based on actual vote shares between the two parties in past elections in Ohio. Trial Ex. P476, Warshaw 2018 Update Report at 10-14.

7. Partisan gerrymandering harms citizen representation.

750. Because of congressional polarization, when an individual's preferred candidate loses an electoral challenge due to gerrymandering, there are profound effects on that individual's representation in Congress. Trial Ex. P571, Warshaw Report at 33-42. Dr. Warshaw's argument regarding political polarization proceeds in five parts: (1) Polarization in Congress has grown as measured by DW-Nominate scores, *id.* at 33-36; (2) Polarization of

Ohio's congressional delegation, *id.* at 36-37; (3) As pro-Republican bias increases, more Republicans are elected to Congress and these Republicans are increasingly more conservative, *id.* at 37-38; (4) Voters are more likely to disagree with their legislators in gerrymandered states, *id.* at 39-41; and (5) Voters who disagree with their legislators are more likely to express distrust in government, *id.* at 41-42. Dr. Warshaw's analysis has dire consequences for Ohio, which ranks among the states with citizens who have the lowest trust in government. *Id.* at 42.

8. *Dr. Brunell agrees that gerrymandering harms citizen representation.*

751. Dr. Brunell agrees with Dr. Warshaw's conclusions about the harms gerrymandering causes to representation. Dr. Brunell agrees that partisan gerrymandering can distort how voter preferences get translated into public policy. Brunell, ECF No. 247 at 124:5-7. Specifically, Dr. Brunell has found that there is increasing polarization in Congress. *Id.* at 120:22-121:3. "When a district swings from Democrat to Republican, since there's not as much overlap between the parties as there used to be, the change could be big." *Id.* at 121:12-15. As a result, "if you vote for the losing candidate – right? – on average you're going to be less well represented than if you voted for the winning candidate." *Id.* at 121:19-25. In his book, Dr. Brunell went as far as to say voters for the losing candidate "end up with no representation." *Id.* at 122:12-22. He also agrees that voters for winning candidates are "more likely to have positive attitudes toward the government." *Id.* at 122:23-123:2. He has found that the kind of dissatisfaction and cynicism that goes with being a losing voter can lead to less trust in government. *Id.* at 123:3-9.

B. Dr. Wendy K. Tam Cho

1. Qualifications

752. Dr. Wendy K. Tam Cho holds a Bachelor's degree in Political Science and Applied Mathematics, a Master's degree in Political Science and Statistics, and a Ph.D. in Political Science, all from the University of California at Berkeley. Cho, ECF No. 242 at 131:7-13; Trial Ex. P086, Cho CV at 1. Dr. Cho is a full Professor at the University of Illinois at Urbana-Champaign with a number of appointments, including in the Department of Political Science, the Department of Statistics, and the Department of Mathematics. Cho, ECF No. 242 at 131:14-20; Trial Ex. P086, Cho CV at 1. Dr. Cho is also a Senior Research Scientist at the National Center for Supercomputing Applications at the University of Illinois at Urbana-Champaign. Cho, ECF No. 242 at 131:21-23; Trial Ex. P086, Cho CV at 1. Dr. Cho has a long list of honorary societies, professional associations, and editorial affiliations. Cho, ECF No. 242 at 131:24-133:23; Trial Ex. P087, Cho Initial Report at 1-2; Trial Ex. P086, Cho CV at 7, 9, 13.

753. Dr. Cho has studied redistricting for over 30 years. Cho, ECF No. 242 at 134:25-135:6; Trial Ex. P087, Cho Initial Report at 2. Dr. Cho has written about redistricting from a variety of perspectives and across several different academic fields including political science, operations research, high performance computing, physics, engineering, and law. Cho, ECF No. 242 at 136:13-137:4; Trial Ex. P087, Cho Initial Report at 2. Dr. Cho has a long list of peer-reviewed publications on the topic of redistricting spanning these academic fields. Cho, ECF No. 242 at 136:10-137:18; Trial Ex. P086, Cho CV at 2-5; Trial Ex. P087, Cho Initial Report at 2.

754. Dr. Cho previously served as an expert witness in two cases involving redistricting, *League of Women Voters of Pennsylvania v. Commonwealth of Pennsylvania*, in the Commonwealth Court of Pennsylvania, and *Agre v. Wolf*, in the United States District Court for

the Eastern District of Pennsylvania. Cho, ECF No. 242 at 138:19-139:1; Trial Ex. P087, Cho Initial Report at 2. Dr. Cho testified at trial in *League of Women Voters of Pennsylvania* and was qualified as an expert. Cho, ECF No. 242 at 139:10-15; Trial Ex. P087, Cho Initial Report at 2-3. Dr. Cho's prior expert testimony was on behalf of the state defendants defending a districting map enacted by a Republican state legislature against a claim that the enacted map was a partisan gerrymander advantaging Republicans. Cho, ECF No. 242 at 138:19-139:9.

2. Methodology

755. Dr. Cho has led the development of computational tools for redistricting analysis, and has focused on the theoretical as well as computational development of a massively parallel evolutionary Markov Chain Monte Carlo (MCMC) algorithm for sampling from complicated multimodal spatial state spaces such as those presented by redistricting applications. *Id.* at 151:1-21; Trial Ex. P087, Cho Initial Report at 2.

756. Dr. Cho's methodology and innovations, including the algorithm she ran in this case, have been the subject of numerous peer-reviewed publications. Cho, ECF No. 242 at 153:20-154:25; Trial Ex. P087, Cho Initial Report at 2; *see, e.g.*, Trial Exs. P428, P442 (peer-reviewed publications authored by Dr. Cho).

757. Prior to applying her algorithm in this case, Dr. Cho conducted a test of the algorithm on a dataset with a known answer and confirmed that her algorithm generates a representative sample. Cho, ECF No. 243 at 101:17-23. Dr. Cho reported the results of this test in a peer-reviewed publication. *Id.* 243 at 92:7-23; Trial Ex. P428, Cho 2018 peer-reviewed publication at 2.

758. Dr. Cho's methodology produces a very large set of possible alternative electoral maps using the same underlying geography and population as the enacted map. Cho, ECF No. 242 at 143:9-146:16; Trial Ex. P087, Cho Initial Report at 3-4. The alternative maps satisfy all

legal requirements as well as traditional districting principles to the extent applied by the legislature in drawing the enacted map. Cho, ECF No. 242 at 143:9-146:16. As a result, the large set of alternative maps provide a baseline for comparison of the partisan effects of the enacted map. *Id.* at 146:1-16. As Dr. Cho testified, her simulation process can be analogized to a repeated series of coin tosses. *Id.* at 143:7-146:16. In determining a typical number of heads from a thousand tosses of a fair coin, one must toss the coins many times to produce a distribution that indicates which outcomes are common and uncommon. *Id.* at 146:17-147:4. Dr. Cho's simulations are the map-drawing equivalent of a series of coin tosses that indicate the typical political outcomes that a non-partisan map-drawing process produces. *Id.* at 143:7-146:16. Comparing the outcomes under the challenged map against the distribution of outcomes under the simulated maps shows whether the challenged map produces an atypical partisan outcome. *Id.*

759. This comparison permits an analysis of the degree to which the political geography of the state is responsible for the observed partisan effect of the enacted map. *Id.* at 148:25-149:18. For example, the comparison permits empirical evaluation of the claim that a partisan effect in favor of Republicans may be attributable to Democrats clustering in cities and inner suburbs leading to a natural packing of Democrats in a smaller number of electoral districts due to a nonpartisan goal of keeping political subdivisions intact within a single electoral district. *Id.* at 148:6-149:18; Trial Ex. P087, Cho Initial Report at 3-4.

760. This comparison reveals when the partisan effect of the enacted map cannot be explained by chance, political geography, legal districting requirements, or the traditional nonpartisan districting principles applied by the enacting legislature. For this reason, the

analysis also supports an inference of partisan intent when a pronounced partisan effect is observed in the enacted map as compared to the alternative maps.

761. The alternative maps are generated using an evolutionary MCMC algorithm designed by Dr. Cho. Cho, ECF No. 242 at 143:9-144:5; Trial Ex. P087, Cho Initial Report at 6-7. The algorithm satisfies the requirements of the Fundamental Theorem of MCMC to produce a representative sample of the entire universe of districting maps that meet the specified districting criteria. Cho, ECF No. 242 at 150:24-151:7, 152:13-153:19; Trial Ex. P087, Cho Initial Report at 6-7. The algorithm is operationalized through code written in C++ by Dr. Cho and her collaborator, Yan Liu. Cho, ECF No. 242 at 155:5-7; Trial Ex. P087, Cho Initial Report at 10.

762. Employing her evolutionary MCMC algorithm, Dr. Cho generated billions of maps that were a representative sample of this universe of districting maps. Cho, ECF No. 243 at 123:13-125:3; *see also id.* at 69:8-13. Dr. Cho then used a regular Monte Carlo sampling algorithm to select a representative sample of approximately 3 million maps that comprised the alternative maps she analyzed in her reports. *Id.* at 125:4-14; *see also id.* at 69:14-20.

3. Districting criteria

763. Each alternative map generated by Dr. Cho meets all of the legal requirements that apply to congressional district maps in the state of Ohio. Cho, ECF No. 242 at 143:16-144:3; 157:15-22. In addition, the alternative maps meet the nonpartisan traditional districting criteria cited by the Ohio legislature as considerations in enacting the enacted map. *Id.* at 157:15-158:14; Trial Ex. P087, Cho Initial Report at 8. No partisan measures or information were used in the map generation process. Cho, ECF No. 242 at 178:19-22; Trial Ex. P088, Cho Rebuttal Report at 3; *see also* Trial Ex. P087, Cho Initial Report at 10.

764. Imposing these constraints on the alternative maps produced by the simulations process ensures that the resulting maps provide a baseline for understanding the typical partisan

effect of an Ohio congressional map produced by a non-partisan redistricting process. Cho, ECF No. 242 at 143:7-144:8; Trial Ex. P088, Cho Rebuttal Report at 1-2. The enacted map is a map that could have been drawn with the same constraints that were applied in generating the alternative maps. Trial Ex. P087, Cho Initial Report at 8.

765. Specifically, all of the alternative maps meet the applicable legal requirements because they are comprised of congressional districts that are contiguous and meet Voting Rights Act and equal population constraints. Cho, ECF No. 242 at 157:18-21; Trial Ex. P087, Cho Initial Report at 8.

766. **Compliance with Voting Rights Act:** Consistent with the undisputed testimony of expert Dr. Lisa Handley that a congressional district in the Cleveland area with a black voting age population (BVAP) of 45% would be sufficient to comply with the Voting Rights Act, all of Dr. Cho's simulated maps contain a district with at least 45% BVAP in the Cleveland area. Cho, ECF No. 242 at 158:20-159:11; Trial Ex. P087, Cho Initial Report at 8; *see infra* Section IV.C. Dr. Cho's algorithm required that each map have at least one district with 45% BVAP for it to be produced as one of the alternative maps. Cho, ECF No. 242 at 159:12-18. In order to ensure that each such district was located in the Cleveland area, Dr. Cho checked in which county the districts satisfying this criterion were located in the process of developing and debugging her code. *Id.* at 159:19-24; *see also* Cho, ECF No. 243 at 73:7-74:22. After performing sufficient checks to ensure that all such districts were located in the Cleveland area, she finalized the code by removing the line of code that performed this check and then ran the simulations for her reports. Cho, ECF No. 243 at 73:7-74:22. While it was a requirement that at least one district in each alternative map have a *minimum* BVAP of 45%, there was no cap on the *maximum* BVAP

for districts in the alternative maps. Cho, ECF No. 242 at 159:25-160:3; Trial Ex. P088, Cho Rebuttal Report at 4.

767. **Population Deviation:** Dr. Cho's algorithm requires that each alternative map have no greater than 1% population deviation between districts. Cho, ECF No. 242 at 163:20-22; Trial Ex. P087, Cho Initial Report at 9. Dr. Cho's alternative maps are constructed at the precinct level, which is the smallest geographic unit for which election data are available. Cho, ECF No. 242 at 164:1-15; Trial Ex. P087, Cho Initial Report at 9. Constructing maps at the precinct level, rather than a lower level of aggregation such as the Census block level, avoids introducing measurement error into the analysis by estimating the partisan split of lower levels of geography. Cho, ECF No. 243 at 26:24-27:7; Trial Ex. P087, Cho Initial Report at 9; *see also* Trial Ex. P088, Cho Rebuttal Report at 4. From the level of 1% population deviation, any alternative map can be brought to exact population equality at the Census block level without compromising any of the other traditional districting principles. Cho, ECF No. 242 at 165:15-167:4; Trial Ex. P087, Cho Initial Report at 9. This fine-tuning would be achieved by splitting a precinct and moving Census blocks around the edge of already broken cities or counties to achieve population equality. Cho, ECF No. 242 at 165:15-167:4; Trial Ex. P087, Cho Initial Report at 9. As Dr. Cho explained in her trial testimony, the chances of this process affecting the partisan effect of the alternative map are "slim to none" given the small number of residents moved between districts. Cho, ECF No. 242 at 167:5-168:12. For this reason, the partisan effect of the simulated maps can be compared to the enacted map without requiring exact population equality. *Id.* at 165:15-167:4; Trial Ex. P087, Cho Initial Report at 9; *see also* Cho, ECF No. 243 at 26:24-27:7.

768. Beyond compliance with the applicable legal requirements, the alternative maps also meet additional constraints based on the traditional nonpartisan districting criteria applied by the Ohio legislature in drafting the enacted map. Cho, ECF No. 242 at 157:15-158:14; Trial Ex. P087, Cho Initial Report at 8-9. Specifically, the alternative maps meet the traditional districting criteria of city and county preservation and compactness. Cho, ECF No. 242 at 157:23-158:9; *see also* Trial Ex. P087, Cho Initial Report at 8-9. This is consistent with the legislative history of the enactment of the current map, in which the sponsor of H.B. 369, Huffman, cited and discussed the traditional districting criteria of city and county preservation and compactness. Cho, ECF No. 242 at 161:11-162:8; Trial Ex. J01, Ohio House Session Tr. at 18-20.

769. **County and City Preservation:** To ensure the alternative maps comply with these traditional districting principles to at least the same degree the Ohio legislature required of the enacted map, the alternative maps were required to perform at least as well as the enacted map on county and city preservation. Cho, ECF No. 242 at 162:9-21; Trial Ex. P087, Cho Initial Report at 8-9. In the enacted map, 23 counties are split across at least two congressional districts, with 5 counties are split across three congressional districts, and 2 counties split across four congressional districts. Cho, ECF No. 242 at 161:9-162:15; Trial Ex. P087, Cho Initial Report at 8. The simulated maps preserve county boundaries at least at the same rate as the current map; that is, no simulated map splits more than 23 counties, nor does any simulated map split more than 5 congressional districts across three congressional districts or more than 2 counties across four congressional districts. Cho, ECF No. 242 at 162:9-16; Trial Ex. P087, Cho Initial Report at 8.

770. In the enacted map, 96.78% of Ohio's cities are wholly contained within a single congressional district; accordingly, in each of the simulated maps, at least 96.78% of cities are kept whole. Cho, ECF No. 242 at 162:17-21; Trial Ex. P087, Cho Initial Report at 8-9.

771. **Compactness:** To ensure the alternative maps comply with these traditional districting principles to at least the same degree the Ohio legislature required of the enacted map, the alternative maps were required to perform at least as well as the enacted map on compactness. Cho, ECF No. 242 at 169:19-170:1. Applying the commonly used Polsby-Popper compactness measure, also known as the isoperimetric quotient (IPQ), the enacted map had an average IPQ of 0.1896. Trial Ex. P087, Cho Initial Report at 9; *see also* Cho, ECF No. 242 at 169:19-170:1. Each alternative map is at least as compact as the enacted map, as measured by the Polsby-Popper compactness measure. Cho, ECF No. 242 at 169:19-170:1; Trial Ex. P087, Cho Initial Report at 9.

772. In drafting congressional districting maps, states are required to comply with legal requirements but the application of the traditional districting principles is within states' discretion. The Ohio legislature was permitted to select among these principles, applying some but not others. Accordingly, not every possible traditional districting principle was applied as a constraint in generating the alternative maps. Cho, ECF No. 242 at 157:23-158:14. Rather, the alternative maps were only required to meet the traditional districting criteria actually applied by the Ohio legislature. *Id.* at 176:11-16.

773. **Incumbency Protection:** While incumbency protection is sometimes mentioned by courts as a traditional districting principle, the alternative maps were not required to protect incumbents. *Id.* at 170:2-171:24. Dr. Cho testified that she came to the conclusion that the Ohio legislature was not seeking incumbency protection based on her review of the enacted map and

the legislative history of the map's enactment. *Id.* at 171:25-176:16. In the legislative history, while Huffman noted that incumbency protection was a traditional districting principle, he went on to expressly disclaim incumbency protection as a consideration in drafting the map. Trial Ex. J01, Ohio House Session Tr. at 18. As noted by Dr. Cho, Huffman referred to the question of what would happen to "Kucinich's district," and he responded: "Look, Kucinich doesn't have a district. Nobody has a district. Every two years, there's an election, and that's how it works. That's how the system works. There's nobody that owns a piece of land in Congress. People elect them." Cho, ECF No. 242 at 173:12-174:7; Trial Ex. J01, Ohio House Session Tr. at 21. Huffman went on to note the three pairs of incumbents that had their residences placed in the same districts but disclaimed any intention to achieve that result, saying, "Now, that isn't necessarily the way it was intended to be. It could've been different, but that's the way it ended up." Cho, ECF No. 242 at 174:25-175:8; Trial Ex. J01, Ohio House Session Tr. at 21-22. Dr. Cho further noted that the enacted map itself provided a further indication that incumbency protection was not a priority, in light of the fact that more than the minimum number of incumbents were paired in the same districts. Cho, ECF No. 242 at 174:8-24. Dr. Cho testified that her simulation essentially implemented the same idea expressed by Huffman: there was no constraint on the minimum or maximum number of incumbents that could be paired in a single district, or on the party of the incumbents that were paired. *Id.* at 175:13-176:10.

774. Dr. Cho contrasted the map-drawing process in Ohio with that in Pennsylvania where she had previously testified as an expert. Cho, ECF No. 243 at 36:7-38:16, 45:4-45:25. In Pennsylvania, the state lost one congressional seat as a result of the 2010 Census. *Id.* at 36:15-17. In redistricting, the Pennsylvania legislature paired the minimum number of incumbent members of congress; that is, there was one pair of incumbents whose residences were placed in

the same congressional district, which was necessary because the number of congressional districts in Pennsylvania was being reduced by one. *Id.* at 37:2-19. Dr. Cho testified that taking into account this fact, along with the “totality of circumstances,” including that the plaintiffs in that case had conceded that incumbency protection had been a goal of the Pennsylvania legislature, led her to conclude that it was a priority in the redistricting process in Pennsylvania. *Id.* at 36:21-37:19. By contrast, the “whole picture” in Ohio, including the pairing of more than the minimum number of incumbents and the statements in the legislative history disavowing incumbency protection, led Dr. Cho to conclude that incumbency protection was not a priority in the redistricting process in Ohio. *Id.* at 37:20-38:16.

775. The alternative maps were generated applying a set of constraints that match the legal requirements and traditional districting principles applied by the Ohio legislature in crafting the enacted maps. Cho, ECF No. 242 at 157:15-158:14; Trial Ex. P087, Cho Initial Report at 8. As Dr. Cho acknowledged, the Ohio legislature no doubt had additional considerations in mind beyond the legal requirements and traditional districting principles in drawing the enacted map. Cho, ECF No. 242 at 178:23-179:2. The constraints applied by Dr. Cho, however, create a set of alternative maps that serve as an appropriate baseline for evaluating the partisan intent and effect of these other considerations.

4. Measuring Partisanship

776. To analyze the partisanship of the districts in the alternative maps, it is necessary to estimate the number of Republicans and Democrats that reside in each district. Trial Ex. P088, Cho Rebuttal Report at 9. Political science often use historical election data to gauge underlying partisanship, and Dr. Cho did the same in this case. *Id.*; *see also* Trial Ex. D004, Hood Report at 11. While, in certain circumstances, party registration could be used as a proxy for partisanship, that is not feasible in Ohio given the more than half of Ohio’s registered voters

are identified as being without a party affiliation. Trial Ex. P088, Cho Rebuttal Report at 9 n.4; *see also* Trial Ex. D004, Hood Report at 27 & n.41.

777. Across her three expert reports, which applied data from different election years, Dr. Cho applied consistent criteria in selecting the elections to include in each partisanship index used in her analysis. Dr. Cho included only statewide elections that were competitive. Trial Ex. P087, Cho Initial Report at 11; *see also* Trial Ex. P088, Cho Rebuttal Report at 8-10. Dr. Cho defined a competitive election as any election within a 60-40 two-party vote split. Trial Ex. P088, Cho Rebuttal Report at 8-10. This is consistent with the usual threshold applied in the field of political science to avoid inappropriately capturing factors that are not partisanship *per se*. Cho, ECF No. 242 at 193:5-11; Trial Ex. P088, Cho Rebuttal Report at 9-10. For example, in a non-competitive election won by a Republican, even Democratic voters may vote for the Republican candidate if there is an especially poor Democratic candidate or the Republican is a long-time incumbent. Excluding non-competitive elections from a partisanship index is necessary to ensure that the index is capturing only partisanship and not these other candidate-specific considerations that are distinct from the partisanship of the voters. Trial Ex. P088, Cho Rebuttal Report at 9-10. Dr. Cho limited her selected elections to statewide elections to provide greater comparability across the state as a whole and to avoid issues that arise from candidate-specific effects that would vary across different districts, differences from campaign spending, or varying incumbency advantages. Trial Ex. P087, Cho Initial Report at 11. Defendants' expert Dr. M.V. Hood III concurred in the decision to limit the selected elections to contested, statewide elections. Trial Ex. D004, Hood Report at 11 & n.15.

778. Dr. Cho's three expert reports applied election data from different election years, enabling her to establish that her findings were not sensitive to the selected data and that the

partisan effect she found was durable across the entire time period from the current map's enactment through the most recent election held under the map. Cho, ECF No. 242 at 190:1-4; *see also* Cho, ECF No. 242 at 194:14-20.

779. In her opening expert report, Dr. Cho calculated the average Democratic vote share in each district of each simulated map applying election data from competitive statewide elections in 2008 and 2010. Trial Ex. P087, Cho Initial Report at 11. In her rebuttal report, Dr. Cho utilized data from competitive statewide elections in 2012 and 2014. Trial Ex. P088, Cho Rebuttal Report at 13; *see also id.* at 10-11 & tbl.4. In her supplemental report, Dr. Cho utilized data from competitive statewide elections in 2018, the most recent election year. Trial Ex. P426, Cho Supplemental Report at 1-2 & tbl.2.

5. *Plaintiff-Specific Analysis*

780. For each of the 17 individual plaintiffs in this case, Dr. Cho located their addresses and identified each plaintiff's congressional district in the enacted map and for each simulated map. Cho, ECF No. 242 at 216:19-217:13; Trial Ex. P087, Cho Initial Report at 11.

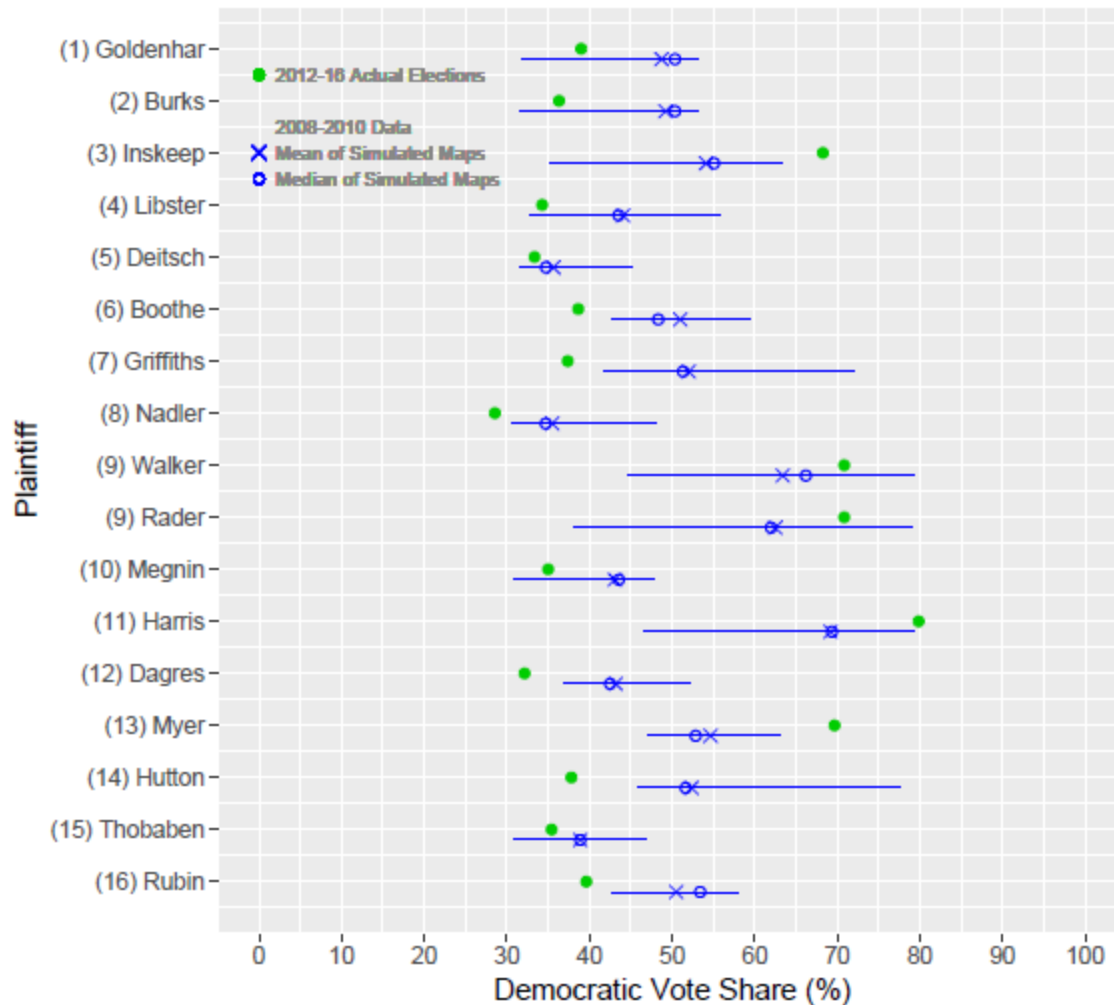
781. Dr. Cho computed the average Democratic vote share for each plaintiff's current congressional district for congressional races from 2012 to 2016 that were contested by both major parties. Trial Ex. P087, Cho Initial Report at 11; *see also id.* at 12 tbl.1.

782. Dr. Cho then computed the average Democratic vote share for the plaintiff's district in the simulated maps using 2008-2010 election data from contested and competitive statewide elections in Ohio. Cho, ECF No. 242 at 215:19-216:13; Trial Ex. P087, Cho Initial Report at 11.

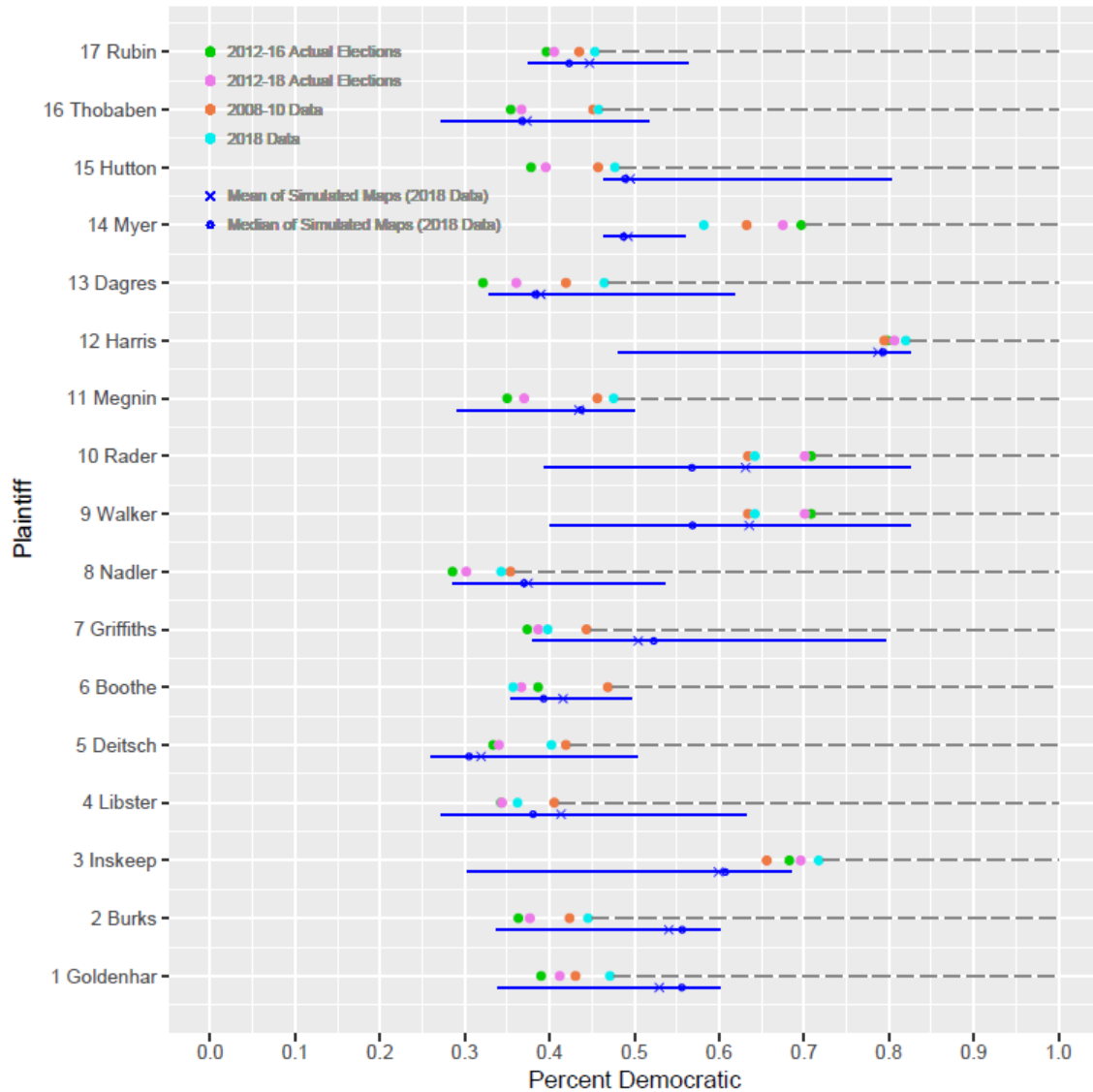
783. For each individual plaintiff, Dr. Cho presented a comparison of the average Democratic share in the plaintiff's current district against the calculated set of average

Democratic vote shares for that plaintiff's set of simulated districts. Trial Ex. P087, Cho Initial Report at 11; *see also id.* at 13-29.

784. The results of Dr. Cho's plaintiff-specific analysis are summarized in the following plot that was introduced as a demonstrative at trial. Demonstrative Trial Ex. PD107 (summarizing Trial Ex. P087, Cho Initial Report at 13-29). The Y-axis on the left side of the plot lists each plaintiff, with his or her congressional district under the current map noted parenthetically. Cho, ECF No. 242 at 219:18-20. In this plot, the horizontal blue lines illustrate the range of values for the average Democratic vote share in the 2008-2010 elections across all of a plaintiff's simulated districts. *Id.* at 219:18-220:5. The blue "X" represents the mean Democratic vote share across the plaintiff's simulated districts, and the blue "O" is the median Democratic vote share. *Id.* at 220:2-220:5. The green dot shows the average Democratic vote share across the 2012-2016 congressional elections, excluding uncontested elections, in each plaintiff's congressional district under the current map. *Id.* at 217:21-218:16, 220:23-221:10.



785. Dr. Cho repeated this analysis using 2018 electoral data to analyze the current congressional districts and an array of different electoral data to analyze the simulated districts for each plaintiff. Trial Ex. P426, Cho Supplemental Report at 6-7. The results of this additional analysis is reported the results in a summary plot in her Supplemental Report. *Id.* at 7; *see also* Cho, ECF No. 242 at 222:2-224:6 (discussing summary plot and PD109-11).



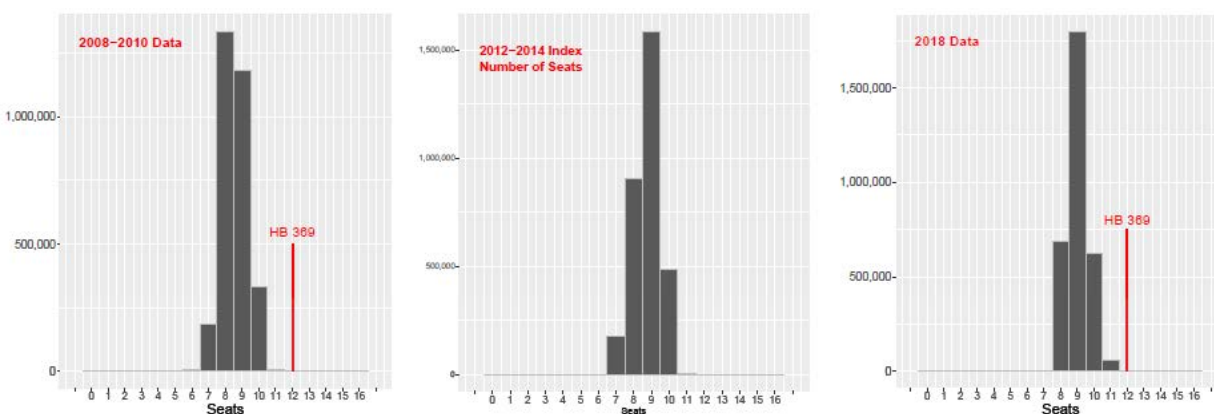
6. *Statewide Partisan Effect of Enacted Map*

786. Dr. Cho analyzed the partisan effect of the enacted map using a variety of partisan metrics to capture multiple dimensions of partisan unfairness. Cho, ECF No. 242 at 186:20-24; Trial Ex. P087, Cho Initial Report at 31. Dr. Cho utilized multiple metrics rather than a single metric in order to capture different dimensions of partisan unfairness, which she described as a “multidimensional concept.” Cho, ECF No. 242 at 186:25-187:7.

787. **Seats Won by Each Party:** Dr. Cho presented a seat-share analysis that counts the number of congressional districts won by Republicans under each of the simulated maps as compared to those under the enacted map. *Id.* at 187:24-188:22; Trial Ex. P087, Cho Initial Report at 32-33; *see also* Trial. Ex. P088, Cho Rebuttal Report at 13-14; Trial Ex. P426, Cho Supplemental Report at 2-4.

788. In each of the four elections held under the current map, Republicans have won 12 of Ohio's 16 congressional districts. Trial Ex. P426, Cho Supplemental Report at 2 & tbl.3. The enacted map also results in 12 Republican seats when applying any one of the three data sets utilized by Dr. Cho in her analysis: 2008-2010 statewide elections, 2012-2014 statewide elections, or 2018 statewide elections. *Id.* at 2.

789. Dr. Cho presented histograms comparing the seat share produced by the enacted map against the seat share under the simulated maps she produced. She repeated this analysis using data from competitive statewide elections in three different time periods: 2008-2010, 2012-2014, and 2018. Cho, ECF No. 242 at 189:2-190:11; Trial Ex. P426, Cho Supplemental Report at 3.



790. Across these three analyses, 8 or 9 Republican seats was the typical outcome under the simulated maps. Cho, ECF No. 242 at 190:23-191:4. Maps with 11 Republican seats

appeared infrequently in the 2008-2010 (0.12% of simulated maps) and 2012-2014 (0.20% of simulated maps) analyses, and were slightly more common (1.88% of simulated maps) in the 2018 analysis. Trial Ex. P426, Cho Supplemental Report at 3. Only in the 2018 analysis did any simulated maps produce 12 Republican seats, with this result occurring in only 0.046% of simulated maps. *Id.*

791. The 12 Republican seats produced by the current map stand in stark contrast to the 8 or 9 Republican seats that is the common and expected outcome of a non-partisan map creation process. Cho, ECF No. 242 at 191:5-12; Trial Ex. P426, Cho Supplemental Report at 3. Twelve Republican seats is an exceptionally uncommon outcome of a non-partisan map creation process. Cho, ECF No. 242 at 191:5-12; Trial Ex. P426, Cho Supplemental Report at 3-4.

792. The fact that Dr. Cho repeated her analysis using data from various election years, ranging from 2008 to 2018, establishes that the observed partisan effect of the enacted map is enduring. Cho, ECF No. 242 at 194:14-20.

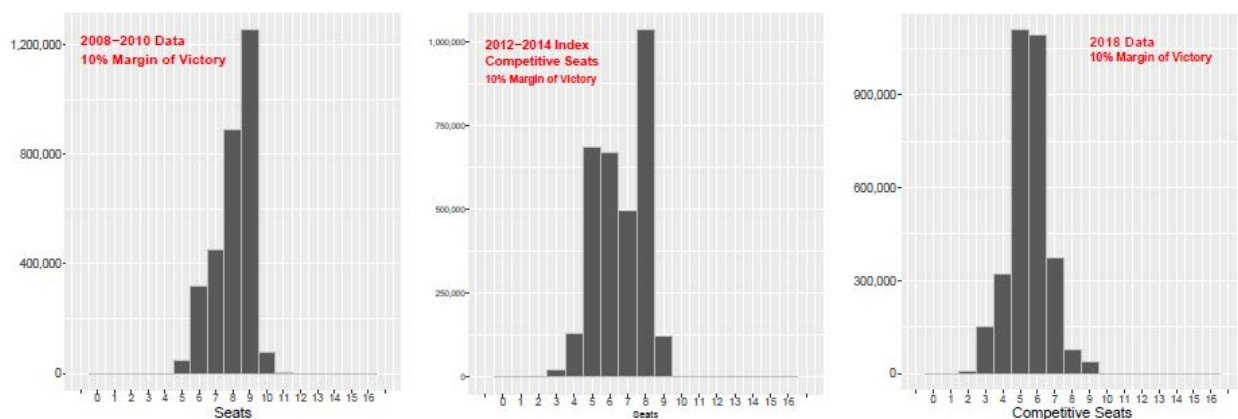
793. **Competitiveness:** Dr. Cho also presented an analysis of the competitiveness of the current map using three different approaches. *Id.* at 191:18-192:17; Trial Ex. P087, Cho Initial Report at 33-37.

794. First, Dr. Cho looked at the total number of competitive elections in the four elections that have been held under the enacted map, using a 10 percentage point margin of victory (the difference between the Republican two-party vote share and the Democratic two-party vote share) as the definition of a “competitive” election. Trial Ex. P426, Cho Supplemental Report at 4. To be sure, there were individual districts in isolated years that had elections within the 10 percent margin of victory: only 2 elections in 2012 and 2 elections in 2018, and zero such elections in either 2014 or 2016. *Id.* at 4-5 & tbl.4. This is an average of 1 competitive district

per election. Moreover, averaging the two-party vote share in each district across all four congressional elections held under the map, none of the current districts have had an average vote share within such a margin of victory. *Id.*

795. As an alternative to counting the number of actual competitive elections held under the current map, Dr. Cho also applied statewide election data from three time periods to measure how many districts would have been competitive under those indices. *Id.* at 4. When imposing 2008-2010 data on to the current map, there were 4 competitive districts. *Id.* When imposing 2012-2014 data on to the current map, there were 2 competitive districts. *Id.* When imposing 2018 data on to the current map, there were 6 competitive seats. *Id.*

796. For comparison, Dr. Cho produced histograms illustrating the distribution of the number of competitive seats across the simulated maps, applying each of the three sets of election data. Cho, ECF No. 242 at 193:12-194:20; Trial Ex. P426, Cho Supplemental Report at 4.



797. Across the simulated maps, when applying the 2008-2010 data, 9 competitive seats was the most common outcome. Cho, ECF No. 242 at 193:12-20; Trial Ex. P087, Cho Initial Report at 34. When applying the 2012-2014 data, 8 competitive seats is the most common

result. Trial Ex. P088, Cho Rebuttal Report at 13. Applying the 2018 data, 5 or 6 competitive seats was most common. Trial Ex. P426, Cho Supplemental Report at 4 fig.2.

798. The enacted map's result of an average of 1 competitive district per election is significantly lower than the typical results under the simulated maps, regardless of which election data is applied to the simulated maps. *See supra* ¶¶ 794, 796. When applying the same data sets to both the enacted map and the simulated maps, the 2008-2010 data (4 vs. 9) and 2012-2014 data (2 vs. 8) show a stark contrast between the number of competitive districts in the enacted map and the typical number of competitive districts in the simulated maps. *See supra* ¶¶ 795-796. Only the comparison of the enacted map and the simulated map using 2018 data results in a comparable number of competitive districts. *See id.*.

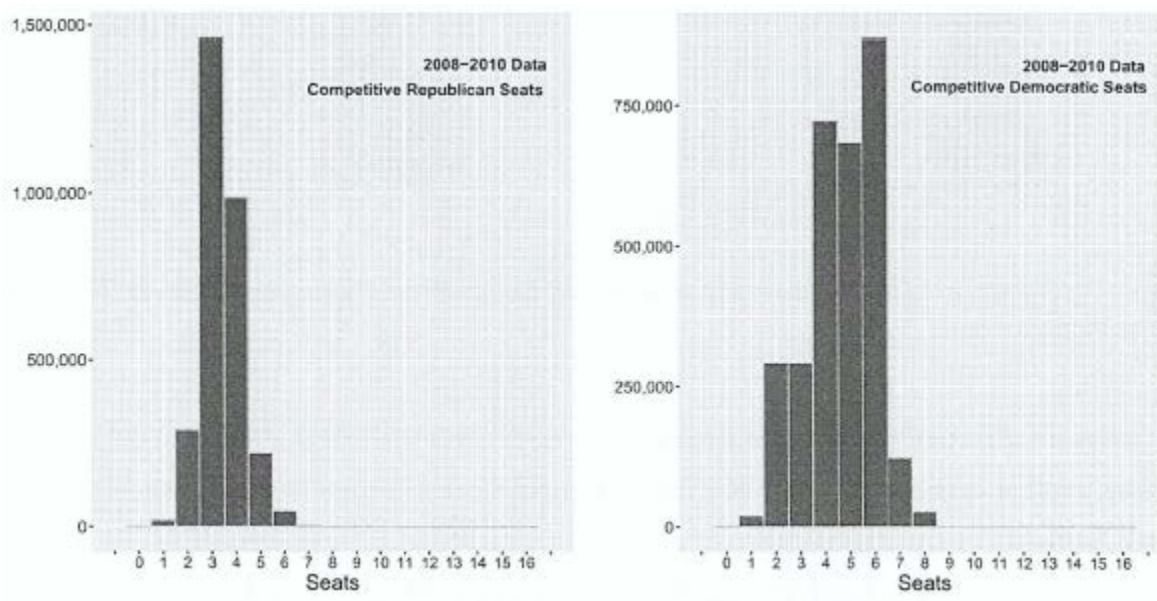
799. Even when a district is competitive, it "leans" towards one party or the other. Trial Ex. P087, Cho Initial Report at 34. That is, one party receives more than 50% of the vote (although, due to the definition of "competitive" being within a 10% margin of victory, less than 55% of the vote). Cho, ECF No. 242 at 195:5-9; Trial Ex. P426, Cho Supplemental Report at 4. If more districts "lean" towards one party than the other, this can be a form of partisan unfairness. Cho, ECF No. 242 at 195:14-24; Trial Ex. P087, Cho Initial Report at 34.

800. In the 2 elections held under the current map that were competitive, the Republican candidate won both. Trial Ex. P426, Cho Supplemental Report at 4-5. Similarly, when imposing the 2008-2010 data on the current map, all 4 of the competitive seats lean Republican. *Id.* at 4. When imposing the 2012-2014 data on the current map, again both competitive seats lean Republican. *Id.* Finally, when imposing the 2018 data on the current map, all 6 competitive seats lean Republican. *Id.* In short, under all these methods of measuring

potential competitive districts under the current map, every competitive district leans in favor of the Republican candidate.

801. In stark contrast to the current map, under which every competitive district leans in favor of the Republican candidate, *id.* at 4-5, the simulated districts lean roughly equally in favor of each political party, *id.* at 4; Trial Ex. P087, Cho Initial Report at 35 & fig.21. This conclusion holds across all three sets of election data used to analyze the simulated maps. Trial Ex. P426, Cho Supplemental Report at 4-5.

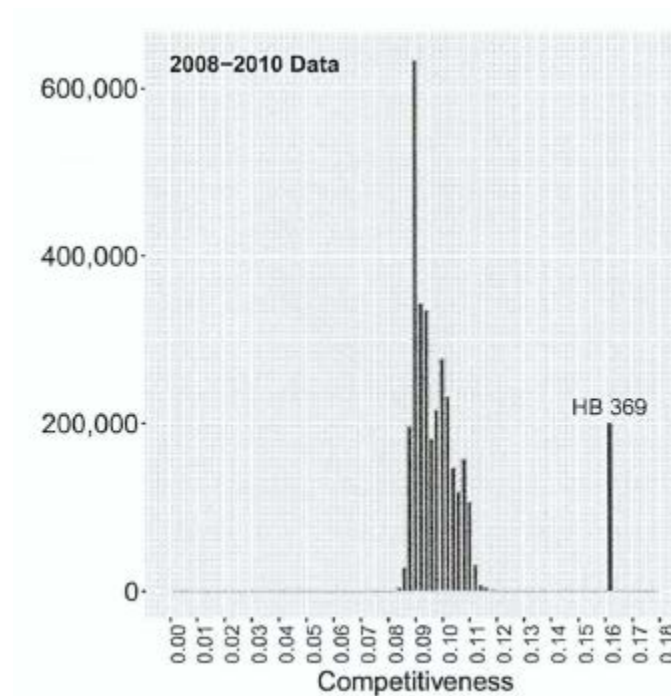
802. Applying the 2008-2010 data, 3-4 of the competitive seats commonly lean Republican, while 4-6 of the competitive seats commonly lean Democratic. *Id.* at 4; Trial Ex. P087, Cho Initial Report at 35 & fig.21.



803. Applying the 2012-2014 data, 2-3 of the competitive seats commonly lean Republican, while 3-5 of the competitive seats commonly lean Democratic. Trial Ex. P426, Cho Supplemental Report at 4.

804. Applying the 2018 data, 2-3 of the competitive seats commonly lean Republican, while 3-4 competitive seats commonly lean Democratic. *Id.*

805. In order to capture multiple facets of competitiveness, Dr. Cho devised a formula that produces a competitiveness score for a given map. Cho, ECF No. 242 at 195:25-197:10; Trial Ex. P087, Cho Initial Report at 36. Scores range from zero to one, with zero being maximum competitiveness and larger values indicating a less competitive map. Cho, ECF No. 242 at 196:5-6; Trial Ex. P087, Cho Initial Report at 36-37. In her initial expert report, Dr. Cho produced a histogram comparing the competitiveness scores of the simulated maps against that of the enacted map. Cho, ECF No. 242 at 195:25-196:8; Trial Ex. P087, Cho Initial Report at 37 fig.23.

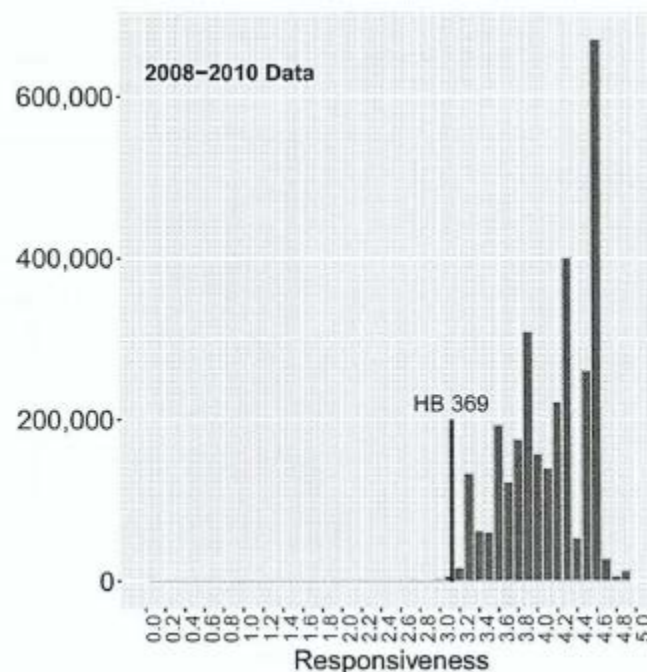


806. Across these various measures, the enacted map is shown to be less competitive than the simulated maps. Trial Ex. P087, Cho Initial Report at 36-37.

807. **Measures Based on the Seats-Votes Curve:** Dr. Cho also used the seats-votes curve to produce values for the responsiveness and biasedness of the enacted map and each simulated map. Cho, ECF No. 242 at 199:1-11; Trial Ex. P087, Cho Initial Report at 37-40.

808. **Responsiveness** is how quickly a change in statewide vote proportion translates into a change in seat proportion. Trial Ex. P087, Cho Initial Report at 38. A higher value on this responsiveness measure indicates a map that is more responsive to the changes in partisan preferences of the voters. *Id.* This responsiveness measure can be thought of as capturing a dimension of competitiveness. *Id.*

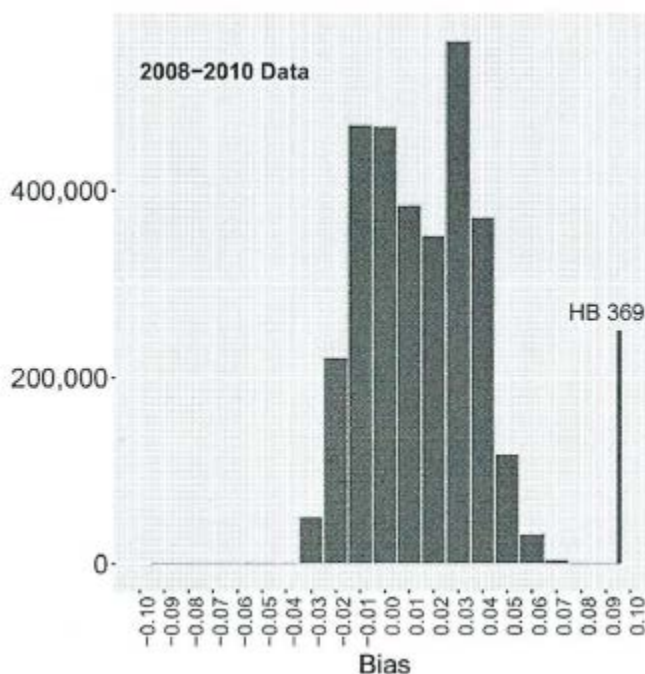
809. The enacted map is less responsive than almost all of the simulated maps. Cho, ECF No. 242 at 199:16-200:3; Trial Ex. P087, Cho Initial Report at 38-39 & fig.25.



810. **Biasedness** is a deviation from bipartisan symmetry that favors one party over the other in the way vote proportion is translated into seat proportion. Trial Ex. P087, Cho Initial Report at 39. Bipartisan symmetry is the idea that both parties should expect to receive the same number of seats given the same vote proportion. *Id.* That is, if Republicans receive 9 seats when they win 51% of the statewide vote, there is only bipartisan symmetry if Democrats would receive 9 seats when they win 51% of the statewide vote. If one party would receive more seats

than the other given the same vote proportion, there is a “bias” in favor of the party that would gain more seats. *Id.*

811. Using a measure of biasedness derived from the seats-votes curve, where a value of zero represents a map with zero bias, some simulated maps have a Republican bias while other simulated maps have a Democratic bias. *Id.* The Republican bias of the enacted map, however, is larger than it is for the simulated maps. Cho, ECF No. 242 at 199:16-23, 200:4-12; Trial Ex. P087, Cho Initial Report at 39 & fig.26.



812. Overall, across an array of metrics and multiple years of election data, the enacted map exhibited more partisan unfairness than the simulated maps. Cho, ECF No. 242 at 200:17-23; Trial Ex. P087, Cho Initial Report at 40.

7. *Partisan Intent of Enacted Map*

813. In addition to quantifying the partisan effect of the current map, Dr. Cho’s analysis rules out possible non-partisan explanations for the partisan outcomes observed under the enacted map. *See supra* ¶¶ 758-760.

814. By generating maps that comply with the same legal requirements and traditional districting principles as were applied in drawing the current map, Dr. Cho's analysis establishes that compliance with legal requirements and traditional districting principles does not explain the enduring 12-4 result of the enacted map. *See supra* ¶ 758.

815. Dr. Cho's analysis also rules out political geography as the cause of the 12-4 partisan outcomes under the enacted map, because Ohio's underlying political geography is the same for the simulated maps as it is for the enacted map. Cho, ECF No. 242 at 201:15-19; *supra* ¶¶ 759-760.

816. Dr. Cho's analysis supports an inference of partisan intent on the part of Defendants in enacting the current Ohio congressional districting map. While any individual nonpartisan concern that went into the map-drawing process might have an incidental partisan effect, in aggregation they should not tilt systematically in favor of any particular party. Cho, ECF No. 242 at 200:24-205:24. Even though it is *possible* that a non-partisan districting process could result in a map with a 12-4 seat share, it is such a "suspicious" result that "the evidence weighs heavily" against that conclusion. *Id.*

8. Critique: Dr. Janet Thornton

817. Defendants' expert Dr. Janet Thornton is a Managing Director at Berkeley Research Group, a consulting firm, with a Ph.D. and Master's degree in Economics from The Florida State University, and a bachelor's degree from the University of Central Florida in Economics and Political Science. Trial Ex. D008, Thornton Report at 1. Dr. Thornton's field of specialization in her education were labor economics and applied statistics. Thornton, ECF No. 246 at 86:10-12.

818. Dr. Thornton does not hold any advanced degrees in Political Science, nor does she hold any degrees in Statistics or Mathematics. Thornton, ECF No. 246 at 118:25-119:8. At

trial, Dr. Thornton stated that she was not offering any opinions in Political Science. *Id.* at 92:15-17. Dr. Thornton's various assertions regarding Dr. Cho's selection of election data to apply are outside the scope of her expertise, relying as they do on Dr. Thornton's evaluation of questions of Political Science. For example, Dr. Thornton questioned the comparability of presidential and midterm elections. Trial Ex. D008, Thornton Report at 15-16. Dr. Thornton also questioned the applicability of statewide election results in predicting voter preference in congressional races. *Id.* at 15-16, 27. Dr. Thornton also makes claims regarding whether party registration or voting behavior better predicts partisanship. *Id.* at 13. All of these claims are outside Dr. Thornton's field of expertise and cannot be credited.

819. In a previous voting rights case, the Court found: "Dr. Thornton's opinion that there should have been a systematic decline in the number of ballots cast in Arizona's 13 non-metropolitan counties during 2016 if the limits on ballot collection impacted the ability of rural and minority persons to vote is simplistic and not credible." Trial Ex. IM072 at 11.

820. Dr. Thornton argues that Dr. Cho failed to provide sufficient materials for Dr. Thornton to evaluate her analysis. Trial Ex. D008, Thornton Report at 4.

821. Specifically, Dr. Thornton points out that Dr. Cho did not provide her code in "native format," and instead provided only a PDF document of the code, which Dr. Thornton claims hampered her ability to evaluate it and prevented her and her team from understanding it fully. Thornton, ECF No. 246 at 137:4-138:6; Trial Ex. D008, Thornton Report at 8-9.

822. Dr. Thornton's inability to review Dr. Cho's code in native format is the result of choices made by either Dr. Thornton or Defendants' counsel, not any failure on the part of Dr. Cho. On October 9, 2018, Plaintiffs' counsel sent a letter to Defendants' counsel offering to provide access to Dr. Cho's code in native format "if you and your experts conclude that you

truly do need to review the code in its native format.” Trial Ex. IM073 at 2. Dr. Thornton was retained approximately two weeks later, sometime around the week of October 22. Thornton, ECF No. 246 at 143:2-9. At the time she submitted her expert report, Dr. Thornton was not aware of this letter or the offer regarding Dr. Cho’s code. *Id.* at 141:3-9.

823. Dr. Thornton also claimed that, in conducting her analysis, “I have no information regarding what data and which parameters are actually used in [Dr. Cho’s] programming code.” Trial Ex. D008, Thornton Report at 9.

824. Again, Dr. Thornton’s lack of information on this point is the result of a lack of diligence rather than obfuscation by Dr. Cho. On October 12, 2018, before Dr. Thornton was retained, Plaintiffs’ counsel sent a letter to Defendants’ counsel disclosing the “operative parameters” and “additional incidental parameters” for constructing Dr. Cho’s simulated maps. Trial Ex. IM074 at 2. Again, Defendants’ counsel chose not to share this letter with Dr. Thornton, and she did not view it until after submitting her expert report. Thornton, ECF No. 246 at 146:12-18. After reviewing the letter, Dr. Thornton confirmed that it contained parameter values that were not known to her when she submitted her expert report. *Id.* at 146:5-8.

825. Dr. Thornton’s other critiques of Dr. Cho’s code and her allegations regarding its contents and purported deficiencies are not credible given Dr. Thornton’s lack of applicable expertise. Dr. Thornton was proffered as an expert “in the field of economic and applied statistical analysis,” and not in computer science or any related field. *Id.* at 92:24-93:1. In fact, Dr. Thornton is, by her own admission, not an expert in C++, the programming language in which Dr. Cho’s code was written. *Id.* at 133:6-8. Dr. Thornton has never written a computer program in the C++ programming language. *Id.* at 133:12-13. Dr. Thornton claimed that, with the aid of a manual or other reference material should could be “proficient” in reading C++, but

was unable to identify any such reference materials she may have consulted in reviewing Dr. Cho's code. *Id.* at 133:14-135:3. At the time of her deposition, the month after submitting her expert report, Dr. Thornton could not remember the difference between the C and C++ programming languages. *Id.* at 136:19-137:3. Any opinions offered by Dr. Thornton regarding the contents of Dr. Cho's code are beyond the scope of her expertise, and outside the fields for which she was proffered as an expert in this case.

826. Dr. Cho utilized an MCMC technique to perform her simulations analysis. *See supra* ¶ 761. Dr. Thornton has never run an MCMC algorithm. Thornton, ECF No. 246 at 129:14-16. Prior to working on this case, Dr. Thornton had never had occasion to review, evaluate, or assess an MCMC algorithm. *Id.* at 129:17-20.

827. In her expert report, Dr. Thornton claimed that Dr. Cho's MCMC methodology was an "optimization" that "is seeking an outcome" of competitiveness, such that "the manner in which she generates new maps (i.e., simulations) is biased towards selecting" competitive districts. Trial Ex. D008, Thornton Report at 11-12. At trial, Dr. Thornton effectively withdrew this claim, acknowledging that Dr. Cho used no electoral or partisan data to create the simulated maps. Thornton, ECF No. 246 at 147:8-17.

828. Dr. Thornton sought to rebut the substance of Dr. Cho's analysis by applying her own analysis that assumes a binomial distribution of congressional election outcomes and purports to establish whether certain thresholds of "statistical significance" are met. Trial Ex. D008, Thornton Report at 19-20. Specifically, Dr. Thornton compared the number of seats won by Republicans in each election year under the challenged map against the number of seats she "would predict based on the Republican representation among the voters" statewide. *Id.* at 19; *see also* Thornton, ECF No. 246 at 169:22-170:6. Then, Dr. Thornton calculated the number of

“standard deviations” between her expected results and the actual results. Trial Ex. D008, Thornton Report at 19. This calculation was performed “using the binomial distribution.” *Id.* at 19 n.31; *see also* Thornton, ECF No. 246 at 158:16-19.

829. The binomial distribution is applicable only where certain conditions are met. Thornton, ECF No. 246 at 149:24-150:4; *see also id.* at 158:16-160:2. Specifically, Dr. Thornton testified that each “trial” must be independent and there must be “sampling with replacement.” *Id.* at 149:24-150:4. Dr. Thornton used the term “sampling with replacement” to mean that the probability of a particular outcome is the same for each trial. *Id.* at 159:24-160:7. In the context of the analysis Dr. Thornton performed, Dr. Thornton testified that applying the binomial distribution requires the assumption that the Republican candidate has an equal probability of winning in each of Ohio’s 16 congressional districts. *Id.* at 162:9-170:3.

830. At trial, Dr. Thornton was unable to define the concept of “mutual independence” as distinguished from “pairwise independence.” *Id.* at 180:14-181:9. Dr. Thornton acknowledged, however, that the binomial distribution requires “mutual independence.” *Id.* at 181:23-182:2.

831. At trial, Dr. Thornton conceded that neither of the conditions required to apply the binomial distribution were present with respect to the analysis she performed. Dr. Thornton acknowledged that election results across different congressional districts “may or may not be independent.” *Id.* at 182:3-14. Dr. Thornton further acknowledged that it was not true that the Republican candidate in all 16 of Ohio’s congressional districts had an equal probability of winning election. *Id.* at 163:4-7.

832. Dr. Thornton's conclusions regarding the statistical significance of Dr. Cho's analysis cannot be credited in light of Dr. Thornton's concessions that the assumptions that undergird her application of the binomial distribution were not met in this case.

833. Dr. Thornton's binomial distribution analysis is also not credible for the additional reason that it produces incredible results. Dr. Thornton stated that a difference is "statistically similar" if it is "less than approximately two (or three) standard deviations." Trial Ex. D008, Thornton Report at 19. Applying the standard of two standard deviations to Dr. Thornton's evaluation of the 2012 congressional elections, any number of Republican seats between 5 and 12 seats would be "statistically similar." Trial Ex. P088, Cho Rebuttal Report at 18; *see also* Thornton, ECF No. 246 at 170:24-173:16. Applying the standard of *three* standard deviations to Dr. Thornton's evaluation of the 2012 congressional elections, any number of Republican seats between 3 and 14 seats would be "statistically similar." Trial Ex. P088, Cho Rebuttal Report at 18; *see also* Thornton, ECF No. 246 at 173:17-25. Dr. Thornton's proffered test, which claims that such patently dissimilar results are in fact "statistically similar," defies credulity.

834. Dr. Thornton referenced an alternative analysis she performed using the Poisson binomial in response to Dr. Cho's criticisms of her methodology. Thornton, ECF No. 246 at 176:2-19. However, Dr. Thornton did not include this analysis in her expert report or in any written format. *Id.* at 177:3-22. Moreover, Dr. Thornton herself stated that she "disagreed" with the idea of running a Poisson binomial "because I thought it would bias the results." *Id.* at 176:2-7. For these reasons, this purported analysis could not be given any weight even if it were to have been introduced into evidence, which it has not.

835. Dr. Thornton performed additional analysis that she reported in two additional tables in her expert report. Trial Ex. D008, Thornton Report at 21 tbl.4, 23 tbl.6. For these analyses, Dr. Thornton again applied the binomial distribution. Thornton, ECF No. 246 at 174:9-16 (Table 4), 175:16-20 (Table 6). Dr. Thornton acknowledged that the same assumptions were made in performing these analyses, but again Dr. Thornton failed to establish that those assumptions held in each case. *Id.* at 175:24-176:2. Having failed to establish that the assumptions on which she relied were valid, Dr. Thornton's analysis cannot be credited.

9. Critique: Dr. M.V. Hood III

836. Defendants' expert Dr. Hood is a professor of Political Science at the University of Georgia. Trial Ex. D004, Hood Report at 1. Dr. Hood submitted an expert report that, in part, criticizes certain aspects of the simulations analysis performed by Dr. Cho. Trial Ex. D004, Hood Report.

837. Dr. Hood alleges that "Professor Cho's districting simulations are based on the idea that the partisan seat distribution should roughly mirror the state's overall political makeup." *Id.* at 25 n.33. Dr. Hood offers no basis for this claim, which is contradicted by Dr. Cho's own words and methodology. For instance, Dr. Cho states in her initial report that "[w]e do not have a system of proportional representation, so the proportion of votes need not mirror the proportion of seats." Trial Ex. P087, Cho Initial Report at 31. Dr. Cho repeated this clearly at trial: "[W]e don't have a system of proportional representation in the state of Ohio for congressional seats." Cho, ECF No. 242 at 207:16-18. Indeed, Dr. Cho's analysis is especially informative because it provides an *alternative* baseline to proportional representation. Rather than comparing the 12-4 outcome under the enacted map against proportional representation, Dr. Cho's analysis compares the partisan outcome under the enacted map against the typical outcome of a non-partisan map-drawing process. Trial Ex. P088, Cho Rebuttal Report at 1-2.

838. Dr. Hood takes issue with the fact that Dr. Cho’s plaintiff-specific analysis “is not based on a single plan, or even a handful of potential plans,” but instead consists of “a comparison to a distribution representing millions of hypothetical plans.” Trial Ex. D004, Hood Report at 28. However, Dr. Cho’s analysis performs a different function than comparison against a single proposed remedial map would by comparing each plaintiff’s ability to elect a candidate of his or her choice under the enacted map against that same ability under non-partisan simulated maps. Trial Ex. P087, Cho Initial Report at 29-30. The comparison suggested by Dr. Hood would illustrate if it is *possible* for each plaintiff to be placed in a district with a greater likelihood of electing a candidate of choice; Dr. Cho’s comparison illuminates whether it is *typical* for each plaintiff to be placed in a district with a greater likelihood of electing a candidate of choice when a non-partisan map-drawing process is followed. Trial Ex. P088, Cho Rebuttal Report at 2.

839. Noting the potential for voting patterns to shift over time, Dr. Hood wondered in his expert report “what the outcome of Professor Cho’s simulations would have been using data from” a later time period than the 2008-2010 data from Dr. Cho’s initial expert report. Trial Ex. D004, Hood Report at 27-28. Dr. Cho answered this question in her rebuttal report, applying data from 2012-2014, and again in her supplemental report, applying data from 2018, and showing that the disparity between the partisan outcomes of the enacted map versus the simulated maps was durable across the entire time period that the enacted map has been in place. *See supra* ¶¶ 789-792; *see also* Trial Ex. P088, Cho Rebuttal Report at 13-14.

840. Dr. Hood proposed a partisan index based on election results from statewide elections from 2004-2010. Trial Ex. D004, Hood Report at 11-12 & tbl.12. Dr. Hood excluded uncontested elections from this index. *Id.* The purpose of a partisan index is to produce an

accurate estimate of the underlying partisanship of voters. Trial Ex. P088, Cho Rebuttal Report at 9. This is why a partisan index must exclude uncontested elections, the results of which would give the obviously inaccurate impression that 100% of voters have the same partisanship, namely that they all belong to the same political party as the only candidate on the ballot. *Id.* When an election is noncompetitive, the same inaccurate impression is created, because the results of non-competitive elections are more likely to be due to factors other than partisanship, such as candidate-specific factors like incumbency or scandal. *Id.* at 9-10; *see also supra* ¶ 777. For this reason, Dr. Hood’s partisan index, which includes noncompetitive elections, has the potential to produce a less accurate picture of the enacted map than the three sets of election data utilized by Dr. Cho in her analysis. The plainest evidence of this is that Dr. Hood’s partisan index suggests that the enacted map produces 11 Republican seats and 5 Democratic seats, despite the fact that all four elections held under the enacted map have in fact resulted in 12 Republican seats. Trial Ex. D004, Hood Report at 15 & tbl.15.

841. Dr. Hood performs an analysis to determine whether Democrats are geographically clustered in Ohio, the results of which lead him to posit that the observed partisan effect of the enacted map may be due to “natural packing.” *Id.* at 10-14. While Dr. Hood presents evidence of geographic clustering of Democrats in Ohio, he presents no analysis of whether, or to what degree, this affects the number of seats won by Republicans. *Id.* at 10-14. Dr. Cho’s analysis acknowledges the phenomenon of political geography, but goes beyond raising the questions that Dr. Hood does by presenting answers to them. *See supra* ¶¶ 758-760; *see also* Cho, ECF No. 242 at 201:15-19. Dr. Cho’s simulated maps are comprised of the same voters living in the same places as under the enacted map. *See supra* ¶¶ 758-760. The discrepancy between the 12 Republican seats under the enacted map and the 8 or 9 Republican

seats under the typical simulated map is therefore the deviation from the typical non-partisan outcome *after* accounting for the “natural packing” effect posited by Dr. Hood. Cho, ECF No. 242 at 201:15-19; *see supra* ¶¶ 758-760; 791.

10. Critique: Dr. Thomas Brunell

842. Intervenors’ expert Dr. Thomas Brunell is a professor of Political Science at the University of Texas at Dallas. Trial Ex. I060, Brunell Report at 1. Dr. Brunell reviewed and provided critiques of Dr. Cho’s reports and simulations process. *Id.* at 2-11.

843. Dr. Brunell notes that Dr. Cho’s simulations process allowed simulated maps to be produced with population deviations of up to 1%. *Id.* at 2. While Dr. Brunell may be correct that the simulated maps may not be constitutional as drawn, Dr. Cho has presented sufficient analysis to demonstrate that the simulated maps are nonetheless appropriate for the purpose they were created, which was to provide a baseline for comparison of partisan effects against the enacted map. *See supra* ¶ 767. While this analysis was presented in the expert report of Dr. Cho’s that Dr. Brunell reviewed, Dr. Brunell did not critique or contradict this analysis. Trial Ex. P088, Cho Rebuttal Report at 4.

844. Dr. Brunell reviews the range of values for the BVAP percentage of the district with the highest such percentage in each simulated map. Trial Ex. I060, Brunell Report at 3-4. Dr. Brunell questions why the maximum value across the simulated maps was 47.948% and raises the possibility that Dr. Cho imposed an upper bound on this value. *Id.* at 4. There is no need to resort to speculation. Dr. Cho stated clearly that no such upper limit was imposed and that the code she utilized in this case confirms this. Trial Ex. P088, Cho Rebuttal Report at 4. Neither Dr. Brunell nor any other expert pointed to any evidence in Dr. Cho’s code, or otherwise, that contradicts Dr. Cho on this point.

845. Referring to the histogram produced by Dr. Cho summarizing the number of Republican seats under each simulated map, Dr. Brunell suggests that “there are just a handful of different maps in Prof. Cho’s exercise, each with hundreds of thousands of repetitions.” Trial Ex. I060, Brunell Report at 5. In his trial testimony, Dr. Brunell clarified that “I’m not saying that’s the way her algorithm worked,” but asserted that “nobody knows” and Dr. Cho “doesn’t know.” Brunell, ECF No. 246 at 211:13-18. This opinion appears to be unsupported speculation premised on a misunderstanding of how data is presented in a histogram. While there is only one histogram bar for all simulated maps that result in 10 Republican seats, that tells one nothing about whether or not those simulated maps are similar to each other in other ways. Trial Ex. P088, Cho Rebuttal Report at 14-15. More obviously, while there are only 17 possibilities for the number of Republican seats under a simulated map (0 Republican seats through 16 Republican seats), there are far more than 17 possible maps.

846. Dr. Brunell takes issue with Dr. Cho’s conclusion that the enacted map is “not very responsive to voters.” Trial Ex. I060, Brunell Report at 6-9. Dr. Brunell cites an analysis from Edward Tufte in which the observed level of responsiveness “is generally between two and three,” and compares that to responsiveness value for the enacted map of “somewhere around 3” from Dr. Cho’s analysis. *Id.* at 7-8. The data used in the Tufte analysis is from three different countries for time periods from 1868 through 1970. *Id.* at 9 tbl.1. Dr. Cho identifies several methodological issues that undermine the comparability of the Tufte data. Trial Ex. P088, Cho Rebuttal Report at 15. More fundamentally, though, Dr. Cho has presented a far more relevant baseline for comparison than the Tufte data: the responsiveness of the simulated maps. The question of whether the enacted map is responsive need not be decided in a vacuum, but instead

can be answered by comparison against the typical responsiveness of a nonpartisan congressional districting map in Ohio. *See supra* ¶ 809.

847. Dr. Brunell noted that incumbency protection and preservation of cores of existing districts were not included as constraints in Dr. Cho's simulations process. Trial Ex. I060, Brunell Report at 11. This fact is undisputed. In his report, however, Dr. Brunell did not point to any evidence, or even assert, that the Ohio legislature in fact applied either factor as a traditional districting principle in drafting the enacted map. *Id.* at 11. Again, Dr. Brunell has raised the question but provided no analysis to answer it.

848. At trial, when asked what role incumbency protection played, Dr. Brunell stated: "I mean, it's hard to quantify. I think it played a role." Brunell, ECF No. 247 at 100:15-17. Asked for the basis for that opinion, Dr. Brunell could not "recall specifically" and said only that "there might have been some testimony early on about that," without specifying what testimony he was referring to. *Id.* at 100:18-20. Compared to Dr. Cho's reasoned analysis of the enacted map and the legislative history preceding its enactment, Dr. Brunell's vague and unsupported opinion to the contrary is not credible.

849. Dr. Brunell acknowledged in his trial testimony that he did not know how, in the context of the enacted map, the concept of preservation of district cores was operationalized. *Id.* at 104:16-18.

850. Before testifying in this case, Dr. Brunell authored a book titled "Redistricting and Representation," Chapter 4 of which discusses "Traditional Redistricting Principles." *Id.* at 103:1-13; *see also* Brunell, ECF No. 246 at 190:6-9. Although Dr. Brunell asserts for purposes of this case that preservation of existing district cores is a traditional districting principle, that

assertion is inconsistent with his book, which discusses seven such principles but not preservation of existing district cores. Brunell, ECF No. 427 at 103:1-104:15.

851. In light of Dr. Brunell's inconsistent view of whether preservation of district cores is a traditional districting principle and his inability to identify how, or even if, the Ohio legislature implemented it, Dr. Brunell's opinion that Dr. Cho's simulations should have incorporated it as a constraint is not credible.

C. Dr. Lisa Handley

1. Qualifications

852. Dr. Lisa Handley is a principal of Frontier International Electoral Consulting and works as an election consultant on voting rights and redistricting issues in the United States and abroad. Trial Ex. P254, Handley Report at 2; Handley, ECF No. 240 at 132:23-133:2. She is also a visiting academic at Oxford Brooks University in the United Kingdom. Trial Ex. P254, Handley Report at 2; Handley, ECF No. 240 at 132:23-133:2.

853. Dr. Handley has a Ph.D. in political science from George Washington University and a bachelor's and master's degree from Kent State University. Handley, ECF No. 240 at 132:19-22.

854. Dr. Handley has taught a graduate seminar at George Washington University on representation and redistricting. *Id.* at 133:3-6. She currently teaches research methods at Oxford Brooks University in the United Kingdom. *Id.* She has guest lectured on voting rights and redistricting at Harvard Law School, Princeton University, Georgetown University and Oxford University in the United Kingdom. *Id.* at 133:7-11.

855. Dr. Handley has published approximately 20 academic articles and articles in edited volumes, most of which are about the Voting Rights Act and redistricting. *Id.* at 133:12-17. Additionally, she has published two books on redistricting and voting. *Id.* at 133:18-25.

856. Dr. Handley has served as a redistricting consultant for at least 16 U.S. jurisdictions since 2000. Trial Ex. P254, Handley Report at 35. Typically, Dr. Handley is retained either before or during redistricting to assist the line-drawers in producing redistricting plans that comply with the Voting Rights Act. Handley, ECF No. 240 at 134:8-13. Some of Dr. Handley's clients include New York City, Virginia, Alaska, New York State, and Kansas. *Id.* at 134:14-18.

857. Dr. Handley has also provided expert witness testimony in at least 9 cases since 2000, Trial Ex. P254, Handley Rep. at 35, and over 20 cases throughout her career, Handley, ECF No. 240 at 135:8-10. Typically, Dr. Handley is retained by either plaintiffs or defendants in cases related to Section 2 of the Voting Rights Act to conduct a racial-bloc voting analysis to determine if plaintiffs meet the three preconditions set out in *Thornburg v. Gingles*, 478. U.S. 30 (1986). *Id.* at 134:19-25. Dr. Handley has served as an expert witness for the Department of Justice in five cases since 2005. *Id.* at 135:5-7. Dr. Handley's testimony has never been excluded by a court. *Id.* at 135:11-12. Court have adopted her findings on racially polarized voting. *Id.* at 135:13-15.

2. District-Specific Functional Analysis

858. Dr. Handley conducted a district-specific, functional analysis of voting patterns by race to ascertain the black voting age population ("VAP") necessary to provide black voters with an opportunity elect their candidates of choice in the vicinity of the 11th Congressional District of Ohio. Trial Ex. P254, Handley Report at 2; Handley, ECF No. 240 at 137:2-8. The analysis conducted by Dr. Handley is also called racial bloc voting analysis, which she used to both determine which candidates are the candidates of choice of African Americans and what percentage of BVAP was necessary to elect those candidates. Trial Ex. P254, Handley Report at 4 n.4, 6, 8, 14 .n.23, 15, 18-25. The term, "district-specific, functional analysis" is one that is

adopted by the courts and the Department of Justice. Handley, ECF No. 240 at 137:9-12. It is based on the same analysis conducted in a case involving Section 2 of the Voting Rights Act. *Id.* at 137:25-138:3. A district-specific, functional analysis is necessary because the percentage minority needed is jurisdiction-specific. *Id.* at 137:13-24. Such a percentage depends on the jurisdiction and the kind of office in question (whether local or federal); a single target number of percent black VAP is not sufficient. *Id.* Drawing districts informed by a district-specific, functional analysis would avoid drawing districts that either fail to provide minorities with an opportunity to elect, or overly concentrates (or packs) minorities in a district. *Id.*

859. Dr. Handley has conducted a district-specific, functional analysis on numerous occasions in the past, including as a redistricting consultant in Alaska, New York City, and Virginia, and as an expert witness in litigation involving Sections 2 and 5 of the Voting Rights Act. *Id.* at 138:4-10.

3. *Success Rates of Black-Preferred Candidates in Ohio's 11th Congressional District*

860. In Dr. Handley's expert report, she presented the actual percentage of votes that black-preferred candidates received in Congressional District 11 prior to redistricting. *Id.* at 138:11-19; Trial Ex. P254, Handley Report at 2-6.

861. Before redistricting, Congressional District 11 has elected African American representatives to Congress since 1968. Trial Ex. P254, Handley Report at 2. The lowest percentage of the vote that the winning candidate had received between 2002 and 2016 was 76.3% for Representative Stephanie Tubbs Jones in 2002. *Id.* at 3. This information is and would have been readily available in 2011. Handley, ECF No. 240 at 139:14-18.

862. The lowest percentage of the vote that African American candidates had received in general elections since 2008 was 74.9%, for Kevin Boyce for State Treasurer in 2010. Trial

Ex. P254, Handley Report at 4. The lowest percentage of the vote that white candidates preferred by Black voters had received in general elections between 2008 and 2016 won was 60.3% for Fitzgerald for Governor in 2014. *Id.* at 5. The lowest percentage of the vote that white candidates preferred by Black voters had received in general elections between 2008 and 2011, when the challenged map was drawn, was 77.7% for O'Shaughnessy for U.S. Senate in 2010. *Id.*⁶

863. The lowest percentage of the vote that Black-preferred candidates had received in Democratic primaries between 2008 and 2016 that included African American candidates was 65.5% for Strickland for U.S. Senate in 2016. *Id.* The lowest percentage of the vote that Black-preferred candidates had received in Democratic primaries between 2008 and 2011 that included African American candidates was 69% for Obama for President in 2008. *Id.*

864. At the time of redistricting, Black-preferred candidates were winning by overwhelmingly high percentages in all statewide and federal contests. Handley, ECF No. 240 at 141:13-19. This was true when the district was 57.7% Black VAP in composition prior to redistricting, and continued to be true after the district was drawn with 52.4% Black VAP. Trial Ex. P254, Handley Report at 6.

4. Percentage BVAP Needed

865. To determine the percentage Black VAP needed to elect Black-preferred candidates, Dr. Handley hypothesized different percentages other than the actual percentage in District 11 at the time of the election, and estimated the percentage of the vote that the Black-preferred candidate would have received if the district was 55%, 50%, 45% or 40% Black based

⁶ Table 3 in Dr. Handley's Report, Trial Ex. P254 at 5, mistakenly includes the vote share received by Boyce in the 2010 State Treasurer, information that was already reported in Table 2 on the previous page. Taking that row out of Table 3 leaves the 2010 U.S. Senate race as the election with the lowest percentage of the vote received by white candidates preferred by Black voters in general elections prior to 2011.

on the turnout and voting patterns of Blacks and whites—how cohesive Black voters are in supporting Black-preferred candidates and how much whites “crossover” to vote for Black-preferred candidates. Handley, ECF No. 240 at 141:20-142:10. Dr. Handley conducted such an analysis on recent elections (statewide and federal elections since 2008 until 2016) occurring within the area of the 11th Congressional District. Trial Ex. P254, Handley Report at 6. And Dr. Handley analyzed both general elections and Democratic primaries. Handley, ECF No. 240 at 147:5-16.

866. Dr. Handley applied three statistical techniques to estimate voting patterns by race: homogeneous precinct analysis, ecological regression and ecological inference. Trial Ex. P254, Handley Report at 7. Homogeneous precinct analysis and ecological regression were employed by the plaintiffs’ expert in *Thornburg v. Gingles*, 478 U.S. 30 (1986), and have been used in most subsequent voting rights cases. *Id.* Ecological inference was developed after *Gingles* and was designed, in part, to address the issue of out-of-bounds-estimates (estimates that exceed 100 percent or are less than zero percent), which can arise in ecological regression analysis. *Id.* Ecological inference analysis has been introduced and accepted in numerous district court proceedings. *Id.*

867. Through Dr. Handley’s district-specific, functional analysis, she determined that a 45% Black VAP district offers Black voters a realistic opportunity to elect their candidates of choice to represent the 11th Congressional District. *Id.* at 17. Indeed, under all conditions, the Black-preferred candidate would have won a majority of the votes even in a 40% Black VAP district. Handley, ECF No. 240 at 149:1-4. Dr. Handley’s analysis shows that a district in the Cleveland area with a 45% Black VAP would provide Black voters with the opportunity to elect their candidates of choice to Congress as the Black-preferred candidate would have carried the

district in all of the scenarios Dr. Handley considered with a “comfortable margin.” *Id.* at 151:8-16; Trial Ex. P254, Handley Report at 17. Congressional District 11 need not be majority Black in composition in that area of the State to provide Black voters with an opportunity to elect candidates of their choice to Congress. *Id.* at 1; 17.

868. Dr. Handley’s analysis can also be used to determine the percentage Black VAP needed to offer Black voters a realistic opportunity to elect their candidates of choice in the 11th Congressional District prior to redistricting. Handley, ECF No. 240 at 150:20-151:1; Trial Ex. P254, Handley Report at 16-17. At the time of redistricting, a district in the Cleveland area with 45% Black VAP would have provided minority voters with an opportunity to elect their candidates of choice to Congress. Handley, ECF No. 240 at 151:8-16; Trial Ex. P254, Handley Report at 16-17 (limiting the data to those pre-dating 2011, the Black-preferred candidate would have easily carried the districts in all of the scenarios Dr. Handley considered).

869. Dr. Handley’s results are based on three different statistical techniques, which all produced very similar results. Handley, ECF No. 240 at 149:23-150:5.

870. The analysis conducted by Dr. Handley could have been sought by the Legislature when drawing the congressional map, especially before taking a historically Cuyahoga County-based district down to Summit County to produce a very oddly shaped district. *Id.* at 151:17-152:1.

5. Dr. Brunell Agrees that the Percentage BVAP Needed is 45%

871. Dr. Brunell does not dispute Dr. Handley’s analysis that the percentage of black voting age population needed for a Voting Rights Act compliant district in the vicinity of District 11 is 45%. Brunell, ECF No. 247 at 94:21-95:10. And Dr. Brunell expressly agrees that Dr. Handley’s analysis is correct. *Id.* at 95:5-9.

D. Dr. David Niven

1. Qualifications

872. Dr. David Niven holds a bachelor's degree in political science from Rutgers University and a Ph.D. in political science from The Ohio State University. He is a tenured professor in the department of political science at the University of Cincinnati, where he teaches courses to undergraduate and graduate students in the areas of the American Congress, the government and politics of Ohio, political parties, American political thought, and other American politics courses. *See* Niven, ECF No. 242 at 5:13-25; Trial Ex. P525, Niven CV at 1.

873. He has published approximately three dozen peer-reviewed articles and chapters in political and social science journals that include *American Politics Research*, *Polity*, *Political Research Quarterly*, *Social Science Quarterly*, and *The Journal of Politics*, and has been requested to serve as peer reviewer for scholarly research in approximately two dozen journals. Niven, ECF No. 242 at 6:11-23; Trial Ex. P524, Niven Report at 1; Trial Ex. P525, Niven CV.

874. Dr. Niven's research has been funded by the American Political Science Association, by the John F. Kennedy Library, and by the Shorenstein Center at Harvard University. Niven, ECF No. 242 at 7:3-5; Trial Ex. P524, Niven Report at 1; Trial Ex. P525, Niven CV.

2. Splits

875. Gerrymandering can effectively create favored and disfavored groups of voters. Niven, ECF No. 242 at 17:16-17, 18:4-8. It can geographically isolate voters, who, as a result, receive less attention from their congressional representative. *Id.* at 17:24-18:4; Trial Ex. P524, Niven Report at 4-5.

876. Census tracts are divisions created by the United States census for the purposes of research and analysis. They are designed to be stable and reliable indicators permitting

researchers to study patterns over time. Niven, ECF No. 242 at 14:4-9, 18:11-15; Trial Ex. P524, Niven Report at 4-6.

877. To measure the partisan nature of a census tract, Dr. Niven employed the OCURD data. The OCURD data consists of population and political data that provides an array of election outcomes and population indicators. Niven, ECF No. 242 at 14:17-22; Trial Ex. P524, Niven Report at 1-2.

878. The election data and the census tract data used by Dr. Niven in his analysis were all available to the Republican map drawers in 2011. Niven, ECF No. 242 at 14:25-15:2; Trial Ex. P524, Niven Report at 1-2.

879. Whether Dr. Niven employed a 4-election or an 8-election index, the results of his findings were consistent. Niven, ECF No. 242 at 15:6-10; Trial Ex. P524, Niven Report at 4-6.

880. Dr. Niven examined the splitting of political subdivisions, communities of interest and neighborhoods, and found that Democratic census tracts were more likely to be split than Republican census tracts. He found the relationship to be statistically significant, replicable and not the product of chance. He concluded that Democrats were targeted for splitting between multiple congressional districts at a cost to their representation by members of Congress. Niven, ECF No. 242 at 11:11-12:4; Trial Ex. P524, Niven Report at 4-6.

881. In the congressional map that was in place in 2001 through 2011, 209 Ohio census tracts were split in two or more parts by the district lines. In the challenged map, 332 are split. This is a 59 percent increase. Niven, ECF No. 242 at 18:24-19:4; Trial Ex. P524, Niven Report at 5.

882. In the challenged map, Democratic census tracts were more likely to be split than Republican census tracts. 52 percent of the tracts that were kept whole were Republican, and 49

percent of the tracts that were divided were Republican. Niven, ECF No. 242 at 20:23-21:9, 21:13-16; Trial Ex. P524, Niven Report at 5-6.

883. Democratic census tracts were 46.8 percent more likely to be split between multiple congressional districts than Republican tracts. Niven, ECF No. 242 at 22:20-23; Trial Ex. P524, Niven Report at 2.

884. The defendants' expert, Dr. Thornton, also reached the conclusion that intact census tracts were more Republican and split census tracts were more Democratic. Niven, ECF No. 242 at 23:15-20; Trial Ex. P526, Niven Rebuttal Report at 1.

885. The pattern of splitting is statistically significant, and therefore appears to have occurred intentionally rather than by chance. Niven, ECF No. 242 at 24:21-25:24. An analysis of the map suggests that the reason was partisan advantage. *Id.* at 26:5-12; Trial Ex. P526, Niven Rebuttal Report. The splits on the map are not justified by any other redistricting priority. Niven, ECF No. 242 at 26:5-12; Trial Ex. P526, Niven Rebuttal Report.

886. Dr. Niven calculated the statistical significance of the pattern by using a measure known as Pearson's Product-Moment Correlation, and also using a T-Test. When he examined the difference in treatment of Democratic and Republican census tracts, he used a Chi-square measure. Niven, ECF No. 242 at 80:18-81:5; Trial Ex. P524, Niven Report at 6.

887. Subjecting a neighborhood to political splitting has a demobilizing effect on political parties and voters. Niven, ECF No. 242 at 12:8-17. Dr. Niven testified, "[I]t's confusing when you look outside your door and the yard signs are for candidates you can't vote for. It's a demobilizing effect when organizers . . . tend to write off areas that are isolated in a district, so they're less likely to contact those voters and try and get them out to vote, and it's an

effect that compromises the representational relationship.” *Id.* at 38:13-19, *see also* Trial Ex. P524, Niven Report at 5.

3. *Congressional Districts 1 and 2*

888. District 1, under the prior map, was a competitive district, swinging back and forth between successive elections. Niven, ECF No. 242 at 27:1-10. Its partisan voting index was D+1, very slightly favoring Democratic candidates. *Id.* at 30:7-12. It included much of Hamilton County and parts of Butler County. *Id.* at 27:3-5; Trial Ex. P524, Niven Report at 6.

889. The population of Hamilton County was too large to be contained within one Congressional District. Niven, ECF No. 242 at 28:15-19. But there would not have been a way to draw a district entirely within Hamilton County in such a way that it would not lean Democratic. *Id.* at 28:1-29:22; Trial Ex. P524, Niven Report at 7.

890. The challenged map split Hamilton County with a “reverse Italy shape” and added Warren County to District 1. Niven, ECF No. 242 at 27:15-20. Hamilton County, which was mostly Democratic, was combined with Warren County, which was “overwhelmingly Republican.” The effect was to “negat[e] . . . that Democratic stronghold in Hamilton County with the folks in Warren County.” *Id.* at 27:19-25. So drawn, District 1 became R+6, reliably Republican. *Id.* at 30:10-15; Trial Ex. P524, Niven Report at 7-8.

891. District 1 is currently R+5. Niven, ECF No. 242 at 30:15-16; Trial Ex. P524, Niven Report at 8.

892. District 2 had voted 59% Republican in the 2008 Presidential election; it thus had more Republicans than it needed in order to be a safe Republican district. Niven, ECF No. 242 at 33:20-25. As drawn, District 2 under the challenged map, it “donate[d]” Republicans to District 1. *Id.* at 33:20-34:11; Trial Ex. P524, Niven Report at 8-9.

893. District 2 was created by combining part of Hamilton County, which was Democratic, with Adams, Brown, Clermont, Highland, Pike, Ross, and Scioto Counties – all of which were Republican counties. The Democrats of Hamilton County in District 2 were thus outnumbered by all of the Republican voters from all of the other counties. Niven, ECF No. 242 at 34:22-35:5; Trial Ex. P524, Niven Report at 9.

894. Cincinnati, Loveland, Skyline Acres, Springfield Township, and Sycamore Township were split in the creation of the 1st and 2nd Districts. Trial Ex. P524, Niven Report at 9; Niven, ECF No. 242 at 35:19-36:6. Fourteen Cincinnati neighborhoods were split. Niven, ECF No. 242 at 36:22-37:3; Trial Ex. P524, Niven Report at 12. These neighborhoods were more Democratic than the city as a whole. Niven, ECF No. 242 at 37:4-10; Trial Ex. P524, Niven Report at 9, 11-12.

895. Under the challenged plan, Hamilton County, a Democratic county, ended up represented by two Republican Congressmen. Niven, ECF No. 242 at 35:6-12; Trial Ex. P524, Niven Report at 9.

4. Congressional District 9 and Adjacent Districts

896. The major premises for district drawing are that districts should: be equal in population, be compact and contiguous, hold intact communities of interest, avoid needless division of political subdivisions such as counties and towns and townships, and not deny or dilute minority voting opportunities. Niven, ECF No. 242 at 40:23-41:7. None of these premises justify or explain the cutting and joining of parts of counties and cities that occurred in the creation of District 9. Niven, ECF No. 242 at 41:13-42:5; *id.* at 44:20-45:11.

897. District 9 contains pieces of five counties, none of which are whole. Niven, ECF No. 242 at 40:5-9. Twelve cities, townships, and villages, none of which are large enough to

require division, are divided, and partly lie within District 9. Trial Ex. P524, Niven Report at 15; Niven, ECF No. 242 at 40:10-13; *id.* at 42:7-13.

898. District 9 is a “textbook” case of packing. Niven, ECF No. 242 at 44:20-21. It is a district that is reliable for Democrats, making the surrounding areas safer for Republicans. *Id.* at 45:7-11; Trial Ex. P524, Niven Report at 14-19.

899. Cleveland and Toledo—parts of each of which are combined by District 9—are classified by the State as being in different regions for purposes of economic development. They have different industrial and economic characteristics. Niven, ECF No. 242 at 42:17-43:5. The prevailing occupations are starkly different. Trial Ex. P524, Niven Report at 17; Niven, ECF No. 242 at 43:8-25. The cities also have different cultural mixes, including which State’s (Ohio or Michigan’s) University football team the residents support. Niven, ECF No. 242 at 42:24-43:5; Trial Ex. P524, Niven Report at 16-19.

5. Congressional Districts 3, 12, and 15

900. Franklin County was the second-most reliably Democratic county in the state. Niven, ECF No. 242 at 46:8-12; Trial Ex. P524, Niven Report at 19, 24, 28.

901. The 15th District, prior to the creation of the challenged map, was very competitive, and had flipped between the parties in 2006 through 2010. Niven, ECF No. 242 at 47:4-11; Trial Ex. P524, Niven Report at 19-20.

902. To replace the loss of population in District 15 caused by the removal of the people into new District 3, portions of several Republican counties, and several entire Republican counties were added, giving District 15 a circumference of more than 900 miles. Niven, ECF No. 242 at 47:18-50:1; Trial Ex. P524, Niven Report at 20-21. In the process, numerous municipal boundaries were disregarded: 30 cities, townships and villages were split between the 15th and another district. Trial Ex. P524, Niven Report at 20, n.49.

903. The challenged map split 72 census tracts in the new 15th District, as opposed to 41 in the previous map's 15th District. Trial Ex. P524, Niven Report at 20; Niven, ECF No. 242 at 48:21-49:7.

904. The new 15th District put together populations that are disparate in terms of wealth, education, and occupation. Research suggests that elected officials cannot represent opposites equally, so some of these places are going to be “forgotten” in their representation. Niven, ECF No. 242 at 49:20-50:4; Trial Ex. P524, Niven Report at 21-22.

905. The 15th District was transformed from a district where the Democratic candidate won comfortably in 2008, to one that the Republican candidate would have won handily in that same election. Niven, ECF No. 242 at 50:7-18; Trial Ex. P524, Niven Report at 22, upper table.

906. This transformation was accomplished by sorting the voters of Franklin County according to their partisanship, and selectively removing, retaining, or adding them to the 15th District. This process turned the 15th from a competitive to a Republican district. Niven, ECF No. 242 at 50:19-51:21; Trial Ex. P524, Niven Report at 24, lower table. The likelihood of this sorting occurring by chance is “astronomically small”—less than 1 chance in the number that is 1 followed by more than 100 zeros. Niven, ECF No. 242 at 51:24-52:19; Trial Ex. P524, Niven Report at 24 n.57.

907. Since this sorting could have not have occurred by chance, Dr. Niven concludes that the sorting was done for the purposes of partisan advantage. Niven, ECF No. 242 at 52:20-53:2; Trial Ex. P524, Niven Report at 23-24.

908. The 12th District was created by adding parts of Franklin County—which was Democratic—to more Republican areas, in order to create a reliably Republican district. Niven, ECF No. 242 at 53:7-15; Trial Ex. P524, Niven Report at 25.

909. The transformation of the 12th District was accomplished by sorting the voters of Franklin County according to their partisanship, and selectively removing, retaining, or adding them to the 12th District to turn the 12th from a slightly Democratic district to a reliably Republican district. Niven, ECF No. 242 at 53:16-54:13; Trial Ex. P524, Niven Report at 25, tables.

910. The creation of District 3 was a classic example of packing. The district is overwhelmingly Democratic, composed of the Democratic areas that were removed from Districts 12 and 15. Democrats were “exiled” from the 12th and 15th Districts to make those two districts safely Republican. Niven, ECF No. 242 at 54:17-21; Trial Ex. P524, Niven Report at 26-28.

911. Across the state, countless divisions were made between neighbors for strategic purposes. Niven, ECF No. 242 at 54:24-55:15. For example, the local Democratic state representative, the former chair of the Democratic party in Ohio, was strategically removed from the 12th District, where he could be a threat, and placed in the 3rd District in a chicken-shaped cutout on the map. Niven, ECF No. 242 at 55:19-56:14; Trial Ex. P524, Niven Report at 27, map.

912. Looking at the map of District 3 as a whole, one does not see the granular detail, how jagged the lines in fact are, street by street, house by house. Niven, ECF No. 242 at 56:17-57:4. These cuts impose a cost to the affected Ohio voters: they diminish the quality of their representation. These cuts were imposed upon Democrats more severely than upon Republicans. *Id.* at 57:14-58:3.

913. Fourteen out of the 16 cities of Franklin County were split between congressional districts. Niven, ECF No. 242 at 58:4-7.

914. The irregular interlocking of the map pieces in Franklin County caused confusion in the special election in the 12th District in 2018. Thousands of people in Franklin County telephoned the Franklin County Board of Elections on the date of the Special Election, asking why their local polling place was not open. The answer was that they did not live in the 12th District, but were confused by its jagged edges. Niven, ECF No. 242 at 58:8-59:8; Trial Ex. P524, Niven Report at 27-28.

915. The Franklin County Board of Elections was itself confused by the district lines. It assigned two thousand voters to the wrong congressional district in the 2012, 2014, and 2016 elections. Niven, ECF No. 242 at 59:11-60:4; *id.* at 61:1-4; Trial Ex. P524, Niven Report at 28.

6. Summit County: Congressional Districts 11, 13, 14, and 16

916. Summit County is small enough to fit entirely within one congressional district, but it is cut into pieces and placed in four districts. Niven, ECF No. 242 at 62:2-6; Trial Ex. P524, Niven Report at 29.

917. If Summit County were simply paired with part of any contiguous county to produce the correct population total, any combination would produce a Democratic-leaning district, because the margin of support for Democrats in Summit County is larger than the margin of support for Republicans in any contiguous county and/or some of the contiguous counties support Democratic candidates. Niven, ECF No. 242 at 62:13-24.

918. There was a distinct difference in the Summit County voters assigned to the four congressional districts: those assigned to the 11th and 13th were overwhelmingly Democratic in orientation, while those assigned to the 14th and 16th were slightly Republican. Niven, ECF No. 242 at 63:9-16; Trial Ex. P524, Niven Report at 32, top table. Summit County was not cut neatly into four pieces. Niven, ECF No. 242 at 64:1-14. Instead, the tentacles on the map of Summit

County maximize the partisan division, and also maximize confusion in Summit County. Niven, ECF No. 242 at 63:21-25 (illustrated in PD62).

919. Fifty-five census tracts were split within Summit County, up from twenty-seven split census tracts under the previous map. Trial Ex. P524, Niven Report at 29.

920. The more Democratic areas of Summit County were more likely to be targeted for splitting. Niven, ECF No. 242 at 64:17-65:6; Trial Ex. P524, Niven Report at 32, lower table. The splitting was strategic: left intact, Summit County produces a Democratic member of Congress. Summit County split into pieces dilutes that power such that two Democrats and two Republicans are produced. Niven, ECF No. 242 at 65:4-13.

7. The map diminishes voters' ability to influence their Congress members

921. One of the practical costs of gerrymandering is that the map compromises Ohio voters' ability to access their member of Congress. Niven, ECF No. 242 at 65:18-66:9; Trial Ex. P524, Niven Report at 4. The map shown in Dr. Niven's report on page 4 shows places where the closest congressional district office is in a district where the constituent does not live. Niven, ECF No. 242 at 65:19-66:5; Trial Ex. P524, Niven Report at 4. This is true for over three million Ohioans. Niven, ECF No. 242 at 66:21-24.

922. In-person visits to a congressional office are more influential than other kinds of contacts. Niven, ECF No. 242 at 66:11-67:9; *id.* at 123:18-124:10; Trial Ex. P524, Niven Report at 4.

8. The mapmakers drew the congressional map for partisan advantage

923. The Republican Party in control of the drawing of Ohio's congressional map imposed partisan splits and, in the process, gained a partisan advantage. Given the pattern of strategic splitting of communities throughout the map, and its statistical significance, Dr. Niven's

conclusion is that the Republican mapmakers drew this map for their political advantage, and at a cost to Democratic voters' representation. Niven, ECF No. 242 at 68:2-16; Trial Ex. P524, Niven Report at 33.

E. Mr. William S. Cooper

1. Qualifications

924. Plaintiffs' expert William Cooper is qualified as an expert in redistricting, map drawing, and demography. Cooper, ECF No. 241 at 140:4-13. Mr. Cooper is "a GIS consultant, mapping consultant," who works "with Census data as it relates to socioeconomic analysis and redistricting." *Id.* at 136:10-13.

925. Mr. Cooper has done this mapping-related work since the late 1980s, and, in that time has "developed thousands of redistricting plans . . . for roughly 750 jurisdictions." *Id.* at 136:14-23; *see also* Trial Ex. P454, Cooper Appendix at Ex. A. In his work in redistricting and demography, Mr. Cooper regularly analyzes Census data as part of his job. Cooper, ECF No. 241 at 138:24-139:5.

926. Mr. Cooper has drawn statewide redistricting plans, including congressional plans in states including Georgia, Alabama, Virginia, Louisiana, Florida, Mississippi, Maryland, Pennsylvania, and Ohio. *Id.* at 137:1-8; 137:19-21. In addition to the present case, he has developed congressional plans in cases regarding partisan gerrymanders in Mississippi, Maryland, and Pennsylvania. *Id.* at 137:9-138:13.

927. Mr. Cooper has testified as an expert regarding redistricting in cases going back to the late 1980s, and in each case in which he has testified he draws redistricting plans. *Id.* at 135:25-136:2; 138:17-19; *see also* Trial Ex. P454, Cooper App'x at Ex. A.

928. Mr. Cooper draws illustrative or remedial districting plans in the cases in which he appears as an expert, and courts have implemented the remedial plans he has drawn. Cooper, ECF No. 241 at 139:9-22.

929. In each and every case in which Mr. Cooper has been proffered as an expert, the court has so qualified him. *Id.* at 139:23-140:3.

2. *Plaintiffs' Proposed Remedial Plan*

930. Mr. Cooper developed a Proposed Remedial Plan for Plaintiffs. Trial Ex. P90, Cooper Decl. ¶ 4.

931. To construct a redistricting plan, “the first task is to obtain the census data and geographic data that would allow you to pull up a plan on screen. So . . . [he] already had what is known as the PL 94-171 file, which is the first file released by the census for purposes of redistricting.” Using that file, he “merged that with electronic files called shapefiles that the Census Bureau releases with information that goes from the county level and state level all the way down to a census block, which is the equivalent, in a city, of nothing more than maybe a city block, and in rural areas a block can be much larger geographically because it’s more sparsely populated.” Cooper, ECF No. 241 at 142:5-18.

932. To construct the Proposed Remedial Plan, Mr. Cooper used “census data and mapping software to reexamine the plan that was adopted in 2012 and apply traditional redistricting principles to result in a map that was a little more fair for Democratic voters and at the same time visually more appealing.” *Id.* at 140:20-24. In drawing the Plan, Mr. Cooper “was also aware that there were many Democratic voters in certain parts of the state, namely in the Cincinnati area; Hamilton County; northeast Ohio, particularly in Cuyahoga County, Summit County; as well as a stronghold of Democratic voters in Franklin County, in Columbus. So, [he]

initially started looking at those areas to see if maybe, with more regularly-shaped districts, one could create a plan that led to a more balanced partisan result.” *Id.* at 141:4-11.

933. Mr. Cooper “started by seeing if there would not be ways to reconfigure these population centers so that the District lines were not so odd and extraordinarily unusual in shape[, by] . . . applying what are known as traditional redistricting principles, but at the same time [he] was also aware of Ballot Initiative 1 that had just been adopted statewide as a result of the referendum. And so [he] knew that according to the ballot initiative, any plan drawn in the future, at least after the 2020 census at a minimum, would have to keep the city of Cincinnati in a single district and the city of Cleveland in a single district.” Based on this, Mr. Cooper planned “to also follow the ballot initiative as well as just apply traditional redistricting principles in any plan that [he] produced.” *Id.* at 146:8-20.

934. In drawing the Proposed Remedial Plan, Mr. Cooper applied “traditional redistricting criteria,” Cooper, ECF No. 241 at 146:25-147:10, “including equipopulation, contiguity, compactness, compliance with the Voting Rights Act, and preserving communities of interest.” Trial Ex. P90, Cooper Decl. ¶¶ 5-6.

935. The districts in the Proposed Remedial Plan are much more “regularly shaped.” Cooper, ECF No. 241 at 141:2-11. For example, in District 1, instead of snaking through Hamilton County and dividing the City of Cincinnati before going to pick up Warren County, Proposed Remedial District 1 is wholly contained within Hamilton County and is far more “regularly shaped.” *Id.* at 153:7-154:3; Trial Ex. P454, Cooper Appendix at 28 (Ex. D-3) and 49 (Ex. E-3). Likewise, District 3 in the current plan is “a mess” while Proposed Remedial District 3 is “much more regularly shaped.” Cooper, ECF No. 241 at 154:6-18; Trial Ex. P454, Cooper Appendix at 30 (Ex. D-3) and 51 (Ex. E-3). Current District 9, “the so-called Snake on the

Lake” runs “from Toledo all the way into Cleveland and Cuyahoga County, crossing Sandusky, Erie, Lorain.” Cooper, ECF No. 241 at 154:22-24; Trial Ex. P454, Cooper Appendix at 36 (Ex. D-3) and 57 (Ex. E-3). Looking at the District, “you can see it’s a long snake-like district.” Cooper, ECF No. 241 at 154:25. Proposed District 9 “encompasses only Lorain County and part of Cuyahoga.” *Id.* at 155:1-3. The other portion of Current District 9 is in remedial District 5, where all of Toledo and Lucas County are made whole. Trial Ex. P454, Cooper App’x at 53 (Ex. E-3). Current District 11 “goes down into Summit County in a very weird fashion, splitting Akron in bizarre ways,” as compared “with the proposed remedial plan, District 11, which is entirely in Cuyahoga County and much more reasonably shaped” containing the whole of Cleveland. Cooper, ECF No. 241 at 155:6-19; Trial Ex. P454, Cooper Appendix at 38 (Ex. D-3) and 59 (Ex. E-3). Current District 13 goes westward from the Ohio-Pennsylvania border and grabs part of Akron, becoming one of four districts that contain Summit County and one of three that contain the city of Akron. Cooper, ECF No. 241 at 155:22-156:7; Trial Ex. P454, Cooper Appendix at 40 (Ex. D-3) and 61 (Ex. E-3); *id.* at 66, 69 (Ex. F). *See generally*, Trial Ex. P454, Cooper Appendix at 23-43 (Ex. D) and 44-64 (Ex. E).

936. A map drawer does not need to know the partisan bias metrics in order to draw a plan that treats parties similarly. Mr. Cooper did not know any of the partisan bias metrics while drawing the plans in this case. Cooper, ECF No. 241 at 152:13-22.

937. However, Plaintiffs’ expert Christopher Warshaw assessed the Proposed Remedial Plan on the partisan bias metrics. Trial Ex. P571, Warshaw Report at 32-33; Trial Ex. P572, Warshaw Rebuttal Report at 12-13; Trial Ex. P476, Warshaw Suppl. 2018 Update Report at 14-15. He found “very little partisan bias in the remedial map.” Warshaw, ECF No. 241 at 17:2-18:8. “There’s still a very small Republican advantage that may reflect the underlying

geography of Ohio, but all of those metrics are relatively close to zero and are certainly not historical outliers,” meaning it would not trigger Dr. Warshaw’s definition of a partisan gerrymander. *Id.*

3. *Traditional Redistricting Criteria*

938. Mr. Cooper assessed the challenged map, identifying numerous ways that it disregards traditional redistricting criteria and amounts to a “geographic monstrosity.” Cooper, ECF No. 249 at 118:6-7; Cooper, ECF No. 241 at 189:24-190:1 (testifying that the 2012 Plan does not take “traditional redistricting” criteria into account.). Plaintiffs’ Proposed Remedial Plan betters the challenged Ohio congressional map on all traditional redistricting criteria. Trial Ex. P090, Cooper Decl. ¶¶ 22-51; *see generally* Trial Ex. P454, Cooper App’x.

939. Looking at counties and municipal subdivisions is a more objective way to identify communities of interest. Cooper, ECF No. 241 at 148:22-149:4. It was possible to draw districts that split fewer counties and municipalities than do the districts in H.B. 369. For example, the Proposed Remedial Plan and Proposed Remedial Plan-Corrected drawn by Mr. Cooper both had fewer county and municipal splits than the challenged congressional plan. Trial Ex. P90, Cooper Decl. ¶¶ 23-32; Trial Ex. P91, Cooper Errata ¶ 5 & Ex. Q; Cooper, ECF No. 241 at 168:19-23.

940. Likewise, Mr. Cooper also drew hypothetical maps that split fewer communities. Two such hypotheticals split only 14 counties; the Ohio congressional map splits 23 counties. Cooper, ECF No. 241 at 175:6-10; Trial Ex. P93, Cooper Second Suppl. ¶¶ 22-24, 42-44.

941. The Proposed Remedial Plan splits 14 counties; the challenged Ohio congressional map splits 23 counties. Trial Ex. P90, Cooper Decl. ¶¶ 32, 25; Trial Ex. P454, Cooper App’x at 66 (Ex. F); Cooper, ECF No. 241 at 158:8-18.

942. The challenged congressional map contains “a number of counties that were split multiple ways. Cuyahoga is split four ways, Summit County is split four ways, Portage is split three ways, I believe Stark is split three ways, Hamilton is split only two ways but in sort of a -- in an irregular fashion.” These splits “jumped out at” Mr. Cooper in his review of the 2012 Plan. Cooper, ECF No. 241 at 145:20-25.

943. The Proposed Remedial Plan splits 27 municipal civil divisions; the challenged Ohio congressional map splits 73 municipal civil divisions. Trial Ex. P90, Cooper Decl. ¶¶ 32, 25; Trial Ex. P454, Cooper App’x at 67-69 (Ex. F); Cooper, ECF No. 241 at 158:19-159:6.

944. The Proposed Remedial Plan splits only 7 municipal civil divisions within Franklin County into two districts; the challenged Ohio congressional map splits 17 municipal civil divisions within Franklin County, 15 into two districts and two into three districts. Trial Ex. P454, Cooper App’x at 67 (Ex. F).

945. In drawing the Proposed Remedial Plan, Mr. Cooper did not split any counties or other political subdivisions if he could avoid it. Cooper, ECF No. 241 at 150:11-13.

946. When a plan has fewer districts, that should generally lead to fewer county splits. Cooper, ECF No. 241 at 151:1-7; Trial Ex. P90, Cooper Decl. ¶ 25; *see also* Cooper, ECF No. 241 at 166:10-167:10 (if the 2002 Plan had 21 splits, this “suggest[s] that it would have been even easier to get below 20 split counties in the 2012 plan . . . right off the bat it should have been possible to aim for 19 splits”).

947. Mr. Cooper’s hypothetical maps also split fewer municipal subdivisions than the challenged congressional map: one such hypothetical splits 36 municipal civil divisions, and another splits 34 municipal civil divisions; the Ohio congressional map splits 73. Cooper, ECF

No. 241 at 175:10-13; Trial Ex. P93, Cooper Second Suppl. at Exs. O-2, O-3; *see also* Hood, ECF No. 247 at 198:17-199:1.

948. Under both of the most common measurements for compactness, the Proposed Remedial Plan is more compact than the challenged Ohio congressional map, as is the Proposed Remedial Plan-Corrected. Trial Ex. P90, Cooper Decl. ¶ 38 & Fig. 7; Trial Ex. P454, Cooper App'x at 73 (Ex. H); Cooper, ECF No. 241 at 156:12-158:7; *id.* at 168:24-25. The challenged plan's compactness scores also overstate the compactness of District 9 – the Snake on the Lake – since the water blocks are included in the scoring. Trial Ex. 090, Cooper Decl. ¶ 40 n.13 (after adjusting for the Lake Erie blocks, District 9 ranks in the bottom five congressional districts nationwide for compactness).

949. One way to assess compactness “is to do the eyeball test and just take a look at it and see if it makes sense visually.” Cooper, ECF No. 241 at 147:20-22. Mr. Cooper's “initial concern” with the 2012 Plan was “because it makes no sense visually.” *Id.* at 147:21-22.

950. In addition to the Proposed Remedial Plan and the correction to the Proposed Remedial Plan, Mr. Cooper offered further possible plans with districts that were more compact than the districts in H.B. 369. Mr. Cooper drew two additional different hypothetical maps, both of which are more compact than the Ohio congressional map. Trial Ex. P90, Cooper Decl. ¶¶ 37-41; Trial Ex. P93, Cooper Second Suppl. ¶ 10; *see also* Hood, ECF No.247 at 198:1-16.

951. The size of a district does not determine its compactness. The fact that the districts under the 2012 Plan are larger in area than those under the 2002 Plan is not the cause of their decreased compactness. Cooper, ECF No. 241 at 148:3-11.

952. The Proposed Remedial Plan has a Voting Rights Act-compliant district in its District 11. Trial Ex. P90, Cooper Decl. ¶ 42; Trial Ex. P454, Cooper App'x at 47 (Ex. E-2)

(BVAP of Remedial District 11 is 47.48%); Trial Ex. P254, Handley Report at 1, 15, 17.

Remedial District 11 has “an overall black voting age population of about 47 percent, which . . . would normally allow African-Americans and other minorities in that district to elect a candidate of choice based on the analysis that Dr. Handley conducted. . . . So given that, [Mr. Cooper] made the decision just to keep District 11 entirely in Cuyahoga County.” Cooper, ECF No. 241 at 159:16-25. District 11 containing slightly higher than the 45 percent BVAP identified by Dr. Handley “just happened” by putting “all of the city of Cleveland in District 11 along with . . . maybe a couple of suburbs.” *Id.* at 160:1-7.

953. Mr. Cooper did not freeze the District 11 in the challenged plan in drawing any of the remedial or illustrative plans because, as constructed, “it’s really problematic.” Based on Mr. Cooper’s ample experience in Section 2 cases, Trial Ex. P454, Cooper App’x at Ex. A, he observed, “The way Summit County is sliced and diced, you know, if this were a Section 2 case, I’m just not sure that would pass muster with the court in terms of whether it would be an acceptable shape for a majority-minority district.” Cooper, ECF No. 241 at 206:13-20.

954. There is nowhere else in the state of Ohio where a congressional district with over 45% BVAP can be drawn if it does not include a significant portion of the City of Cleveland and the municipalities immediately to its east. Cooper, ECF No. 249 at 59:20-61:3. If you do not include significant portions of eastern Cleveland and the municipalities immediately to its east in Cuyahoga County, it is impossible to create congressional district in Ohio with a BVAP over 45%. *Id.* at 59:24-61:3. These portions of Cleveland and its immediately eastern townships are included in District 11 in both the 2002 and 2012 Plans. *Id.* at 60:15-23.

955. In Mr. Cooper’s extensive Section 2 experience, he is not aware of a single instance of the statistician or other political scientists in those cases running yet another district-

specific functional analysis on the remedial or illustrative maps after he has drawn them. The district-specific functional analysis guides the drawing of districts in the first instance. Cooper, ECF No. 249 at 135:5-14.

956. A minority opportunity district could have been created in Franklin County under a different configuration of the map. Trial Ex. P90, Cooper Decl. ¶ 43; Trial Ex. P454, Cooper App'x at 47 (Ex. E-2), 51 (Ex. E-3 District 3); Trial Ex. P93, Cooper Second Suppl. ¶¶ 26, 46.

957. Under the Proposed Remedial Plan, District 3 has a Black Voting Age Population of 30.31%. Trial Ex. P90, Cooper Decl. ¶ 43; Trial Ex. P454, Cooper App'x at 47 (Ex. E-2). In constructing District 3, Mr. Cooper “was also mindful of the significant black population” in Franklin County. Cooper, ECF No. 241 at 161:8-16.

958. Black Voting Age Population could have been increased in district located in Cincinnati, in Hamilton County. Trial Ex. P90, Cooper Decl. ¶ 44; Trial Ex. P93, Cooper Second Suppl. ¶¶ 27, 47.

959. Under the Proposed Remedial Plan, District 1 has a Black Voting Age Population of 26.74%. Trial Ex. P90, Cooper Decl. ¶ 44; Trial Ex. P454, Cooper App'x at 47 (Ex. E-2). This compares to 21.3% in the 2012 Plan. This difference “just happened because [Mr. Cooper] left Cincinnati in a single district rather than splitting it into part of District 2 as well as District 1.” Cooper, ECF No. 241 at 160:10-161:7; Trial Ex. P454, Cooper App'x at 26 (Ex. D-2).

960. The Plan complies with the requirements of Issue 1. Trial Ex. P90, Cooper Decl. ¶ 5; *see also* Cooper, ECF No. 241 at 169:7-9. In addition to the specifics of not splitting Cincinnati and Cleveland, the requirements of Ballot Issue 1 “mirror” traditional redistricting principles. Cooper, ECF No. 241 at 146:21-24.

4. Incumbency

961. Ohio lost two congressional districts in the 2011 redistricting cycle. Trial Ex. P93, Cooper Second Suppl. ¶ 6. After losing two seats following apportionment, there was no need for three sets of incumbents to have been paired, it could have been reduced to two. Cooper, ECF No. 241 at 176:14-16.

962. In the drawing of the 2012 Plan, three sets of incumbents were paired rather than the two sets of incumbents. *Id.* ¶ 7.

963. The location of the 2011 incumbents did not require the Ohio congressional map to be structured as it was. For example, Mr. Cooper was able to draw two hypothetical maps that pair two 2011 Democratic incumbents, two 2011 Republican incumbents, and one 2011 Democratic with one 2011 Republican incumbent are better the Ohio congressional map on traditional redistricting criteria. Trial Ex. P93, Cooper Second Suppl. ¶¶ 5-7. Under these hypothetical maps, the Democratic incumbents paired under the first map were Representatives Kucinich and Fudge, and under the second, were Representatives Kucinich and Sutton. *Id.* at fig.3, fig.8.

964. Congressional plans, which pair the same number of incumbents with the same match-up of political parties as under the Ohio congressional map, are still better than the Ohio congressional map on traditional redistricting criteria and partisan symmetry. *See generally* Trial Ex. P93, Cooper Second Suppl.; *see also* Trial Ex. P572, Warshaw Rebuttal Report at 12-13.

965. In constructing the Proposed Remedial Plan, because plans are often constructed conscious of incumbents, in general, Mr. Cooper did not pair incumbents except when in direct conflict with traditional redistricting criteria and compliance with Issue 1. Trial Ex. P90, Cooper Decl. ¶ 6. After identifying that one of the incumbent addresses received from counsel for the 2018 incumbents was incorrect, Mr. Cooper corrected the Proposed Remedial Plan, so

incumbents are not paired except for Representatives Chabot and Wenstrup. Cooper, ECF No. 241 at 167:13-168:17, 169:19-170:14, 195:5-15; Trial Ex. P91, Cooper Errata ¶ 2; Trial Ex. P90, Cooper Decl. ¶ 36. These incumbents are only paired to keep the city of Cincinnati whole and thus comply with Issue 1. Trial Ex. P90, Cooper Decl. ¶¶ 6, 36; Trial Ex. P91, Cooper Errata ¶¶ 2-3.

966. Mr. Cooper used the 2018 incumbents to construct the Proposed Remedial Plan since the Plan is being offered for future use, a choice with which Defendants' expert agrees. Hood, ECF No. 247 at 199:2-14.

967. In response to the report of Dr. Hood, Mr. Cooper drafted hypothetical plans that considered the location of the 2011 incumbents. Following the description from Dr. Hood's report, Mr. Cooper drafted plans using 2011 incumbents that "pair two Democrats in one district, two Republicans in one district, and then pair a Democrat and Republican in the third district." Cooper, ECF No. 241 at 171:1-4, 173:11-175:5; *see also* Hood, ECF No. 247 at 195:24-196:9; Trial Ex. D4, Hood Report at 4.

968. Dr. Hood's report and accompanying materials did not include information based on where the 2011 incumbents lived. Cooper, ECF No. 241 at 172:14-23. This caused Mr. Cooper to have an issue with one of the incumbent addresses and resubmit the hypothetical plans the next day. *Id.* at 171:19-173:10; Trial Ex. P93, Cooper Second Suppl. Decl.

969. The hypothetical maps "show that one could have drawn a plan very similar in many ways to the proposed remedial plan that would have protected the same number of incumbents as the 2012 plan did for the 2011 incumbents, and at the same time split just 14 counties with compactness scores that were about the same as the proposed remedial plan, and political fairness scores that were very similar as well. So a plan could have been developed

much like the proposed remedial plan, but overlaid onto the 2011 incumbents.” Cooper, ECF No. 241 at 171:9-18; Trial Ex. P93, Cooper Second Suppl. Decl.

970. Mr. Cooper would not have paired the same exact incumbents as the 2012 Plan because the particular pairings disregarded traditional redistricting criteria. Cooper, ECF No. 241 at 176:17-24, 198:6-8, 198:21-200:2. Contrary to Defendants’ attempt to impeach Mr. Cooper on this point, *id.* at 200:3-201:1, he testified to the same at the time of his deposition, *id.* at 213:11-215:9.

5. Election Results

971. The Proposed Remedial Plan has the following Democratic congressional vote percentages of the two-party vote:

CD	2012		2014		2016		2018	
	Proposed Plan	2012 Plan	Proposed Plan	2012 Plan	Proposed Plan	2012 Plan	Proposed Plan	2012 Plan
1	48.5%	39.5%	44.2%	36.7%	48.3%	40.7%	57.2%	47.8%
2	30.6%	41.4%	25.4%	34.1%	25.0%	33.5%	31.1%	41.7%
3	66.9%	71.4%	58.2%	63.6%	63.1%	68.2%	68.3%	73.6%
4	29.6%	38.5%	24.2%	32.3%	22.3%	31.7%	26.6%	34.7%
5	62.3%	40.6%	51.2%	30.4%	52.6%	28.8%	54.3%	36.1%
6	44.4%	46.8%	33.7%	39.8%	28.6%	29.4%	33.0%	30.8%
7	39.3%	43.6%	21.2%	0.3%	28.5%	31.4%	35.5%	41.3%
8	2.0%	0.0%	29.2%	28.9%	28.5%	28.2%	34.0%	33.4%
9	59.4%	76.0%	44.6%	67.7%	48.9%	68.6%	55.1%	67.8%
10	37.8%	38.6%	32.7%	32.6%	33.9%	33.8%	43.0%	43.0%
11	95.7%	99.7%	81.5%	79.2%	81.7%	80.3%	83.5%	82.3%
12	39.7%	36.6%	33.3%	29.0%	38.4%	31.7%	54.3%	47.9%
13	62.6%	72.9%	54.4%	68.4%	54.2%	67.6%	51.4%	61.0%
14	48.6%	41.8%	27.0%	34.4%	37.5%	37.4%	43.8%	44.8%
15	42.3%	38.6%	35.8%	34.1%	31.2%	33.7%	33.9%	40.5%
16	59.1%	48.0%	48.5%	36.2%	51.0%	35.2%	55.8%	43.3%

Trial Ex. P598, Cooper Third Suppl. Decl. ¶ 5; *see also* Cooper, ECF No. 241 at 177:18-178:7.

972. Applying imputed election results for the uncontested races in 2012 and 2014 give the following results in the Proposed Remedial Plan:

	2012		2014		2016		2018	
CD	Proposed Plan	2012 Plan	Proposed Plan	2012 Plan	Proposed Plan	2012 Plan	Proposed Plan	2012 Plan
1	48.6%	39.5%	44.3%	36.7%	48.3%	40.7%	57.2%	47.8%
2	30.6%	41.4%	25.3%	34.1%	25.0%	33.5%	31.1%	41.7%
3	67.6%	71.4%	58.4%	63.6%	63.1%	68.2%	68.3%	73.6%
4	29.9%	38.5%	24.2%	32.3%	22.3%	31.7%	26.6%	34.7%
5	62.3%	40.6%	51.2%	30.4%	52.6%	28.8%	54.3%	36.1%
6	44.4%	46.8%	36.6%	39.8%	28.6%	29.4%	33.0%	30.8%
7	39.2%	43.6%	29.6%	0.3%	28.5%	31.4%	35.5%	41.3%
8	33.9%	0.0%	29.2%	28.9%	28.5%	28.2%	34.0%	33.4%
9	58.7%	76.0%	47.6%	67.7%	48.9%	68.6%	55.1%	67.8%
10	38.7%	38.6%	32.7%	32.6%	33.9%	33.8%	43.0%	43.0%
11	85.4%	99.7%	81.5%	79.2%	81.7%	80.3%	83.5%	82.3%
12	39.0%	36.6%	33.2%	29.0%	38.4%	31.7%	54.3%	47.9%
13	62.6%	72.9%	59.7%	68.4%	54.2%	67.6%	51.4%	61.0%
14	48.8%	41.8%	41.5%	34.4%	37.5%	37.4%	43.8%	44.8%
15	42.3%	38.6%	35.8%	34.1%	31.2%	33.7%	33.9%	40.5%
16	55.0%	48.0%	51.5%	36.2%	51.0%	35.2%	55.8%	43.3%

Trial Ex. P598, Cooper Third Suppl. Decl. ¶ 5; Trial Ex. P572, Warshaw Rebuttal Report at 13; *see also* Cooper, ECF No. 241 at 162:22-163:9.

973. With these imputations calculated, in 2012, there were 6 districts with a Democratic majority, plus two additional competitive districts. In 2014, there were 5 districts with a Democratic majority, plus one additional competitive district. In 2016, there were 5 districts with a Democratic majority, plus two additional competitive districts. In 2018, there were 8 districts with a Democratic majority, with no additional competitive districts. Trial Ex. P598, Cooper Third Suppl. Decl. ¶ 5; Trial Ex. P572, Warshaw Rebuttal Report at 13.

974. This compilation of election data “is indicative of what might have happened” through “some historical evidence.” Cooper, ECF No. 241 at 194:24-25.

975. Under the correction to the Proposed Remedial Plan, the only changes to these election results are between .03-.04% difference in the Democratic two-party vote share between District 4 and District 8. Cooper, ECF No. 241 at 169:11-18; Trial Ex. P91, Cooper Errata ¶ 9 & Ex. S. The rest of the proposed districts remain the same. *Id.* ¶ 4.

976. One of Mr. Cooper's hypothetical has the following Democratic congressional vote percentages of the two-party vote:

	2012		2014		2016		2018	
CD	Hypothetical Plan 1A	2012 Plan	Hypothetical Plan 1A	2012 Plan	Hypothetical Plan 1A	2012 Plan	Hypothetical Plan 1A	2012 Plan
1	48.4%	39.5%	44.2%	36.7%	48.3%	40.7%	57.2%	47.8%
2	30.2%	41.4%	28.4%	34.1%	26.8%	33.5%	31.9%	41.7%
3	37.7%	71.4%	25.5%	63.6%	27.2%	68.2%	34.0%	73.6%
4	25.9%	38.5%	24.0%	32.3%	22.0%	31.7%	26.4%	34.7%
5	39.1%	40.6%	22.4%	30.4%	28.5%	28.8%	35.0%	36.1%
6	49.4%	46.8%	42.9%	39.8%	33.6%	29.4%	34.2%	30.8%
7	37.8%	43.6%	32.7%	0.3%	33.8%	31.4%	43.0%	41.3%
8	10.0%	0.0%	26.2%	28.9%	26.7%	28.2%	32.5%	33.4%
9	62.3%	76.0%	51.2%	67.7%	52.6%	68.6%	54.9%	67.8%
10	59.4%	38.6%	44.5%	32.6%	48.9%	33.8%	55.0%	43.0%
11	95.7%	99.7%	81.5%	79.2%	81.7%	80.3%	83.5%	82.3%
12	39.3%	36.6%	32.8%	29.0%	37.9%	31.7%	53.8%	47.9%
13	59.3%	72.9%	48.6%	68.4%	51.1%	67.6%	55.8%	61.0%
14	61.0%	41.8%	52.6%	34.4%	52.6%	37.4%	50.5%	44.8%
15	67.1%	38.6%	58.6%	34.1%	63.4%	33.7%	68.9%	40.5%
16	49.2%	48.0%	27.9%	36.2%	37.7%	35.2%	44.1%	43.3%

Trial Ex. P598, Cooper Third Suppl. at 5; Cooper, ECF No. 241 at 178:8-13.

977. The other hypothetical has the following Democratic congressional vote percentages of the two-party vote:

	2012		2014		2016		2018	
CD	Hypothetical Plan 2A	2012 Plan	Hypothetical Plan 2A	2012 Plan	Hypothetical Plan 2A	2012 Plan	Hypothetical Plan 2A	2012 Plan
1	48.5%	39.5%	44.2%	36.7%	48.3%	40.7%	57.2%	47.8%
2	30.3%	41.4%	28.4%	34.1%	26.8%	33.5%	31.9%	41.7%
3	37.7%	71.4%	25.5%	63.6%	27.2%	68.2%	34.0%	73.6%
4	25.9%	38.5%	24.0%	32.3%	22.0%	31.7%	26.4%	34.7%
5	39.1%	40.6%	22.4%	30.4%	28.5%	28.8%	35.0%	36.1%
6	49.4%	46.8%	42.9%	39.8%	33.6%	29.4%	34.2%	30.8%
7	37.8%	43.6%	32.7%	0.3%	33.9%	31.4%	43.0%	41.3%
8	10.0%	0.0%	26.2%	28.9%	26.7%	28.2%	32.5%	33.4%
9	62.3%	76.0%	51.2%	67.7%	52.6%	68.6%	54.9%	67.8%
10	59.7%	38.6%	45.2%	32.6%	49.6%	33.8%	55.7%	43.0%
11	92.0%	99.7%	77.6%	79.2%	78.7%	80.3%	81.5%	82.3%
12	39.3%	36.6%	32.8%	29.0%	37.9%	31.7%	53.8%	47.9%
13	61.2%	72.9%	50.3%	68.4%	51.8%	67.6%	55.5%	61.0%
14	61.0%	41.8%	52.6%	34.4%	52.6%	37.4%	50.5%	44.8%
15	67.1%	38.6%	58.6%	34.1%	63.4%	33.7%	68.9%	40.5%
16	49.2%	48.0%	27.9%	36.2%	37.7%	35.2%	44.1%	43.3%

Trial Ex. P598, Cooper Third Suppl. at 6; Cooper, ECF No. 241 at 178:8-13.

978. The percentage of the vote alone is insufficient to determine whether a district is packed or cracked. Cooper, ECF No. 241 at 163:14-16. One must take into account the particular geographic, spatial, racial, and partisan factors in addition to the percentage of the vote to determine whether a district is packed or cracked. *Id.* at 163:14-25. For example, putting a city that had been split back together may drop the Democratic percentage of the neighboring district, as is the case for Proposed Remedial Districts 1 and 2. *Id.* at 164:1-17. An individual Democratic voter who ends up in a less Democratic district is not necessarily worse off as the specifics of the district would have to be considered. *Id.* at 164:18-21; 163:14-25.

6. Election Results for H.B. 319 and H.B. 369

979. Mr. Cooper provided a comparison of the election results under H.B. 319 and H.B. 369. Cooper, ECF No. 241 at 178:18-179:19; Trial Ex. P90, Cooper Decl. at Fig. 9; Trial Ex. P454, Cooper App'x at 74-78 (Ex. I).

980. The comparison demonstrates that there is very little difference in the partisan composition of each of the districts between H.B. 319 and H.B. 369. Trial Ex. P454, Cooper App'x at 74-78 (Ex. I).

7. Rebuttal Plan

981. Mr. DiRossi, one of the map drawers, testified to a number of features that were purportedly required to be included in Ohio's congressional plan following the 2010 Census or were necessary effects of other supposed requirements. DiRossi, ECF No. 243 at 155:12-17; 157:5-9; 158:23-159:6; 162:7-18, 166:14-19; 167:12-17; 168:7-17; 168:18-22; 171:1-12; 173:7-10; 176:9-14; 176:22-177:9; 177:17-22; 177:23-178:6; 178:23-179:12; 180:3-9; 182:20-183:1; 183:4-13; 184:4-13; 186:15-22; 188:3-5; 192:24-195:2; 237:13-22; 245:21-246:23; 282:4-283:21; 288:13-25.

982. Mr. Cooper reviewed these supposedly necessary features identified by Mr. DiRossi and drafted a congressional plan in rebuttal to demonstrate whether such constraints compel the challenged plan. Cooper, ECF No. 249 at 35:8-15, 36:16-24; Trial Ex. P617, Rebuttal Plan.

983. In response to Mr. DiRossi's claims about the necessary features of the plan, Mr. Cooper ensured that Warren County was kept whole in District 1, even though Mr. DiRossi gave no testimony as to why this was a necessary feature of the plan. Cooper, ECF No. 249 at 37:2-4; *see* DiRossi, ECF No. 243 at 186:15-22.

984. Based on Mr. DiRossi's testimony, in the Rebuttal Plan, Mr. Cooper paired 2011 incumbent Representatives Kaptur and Kucinich, ensured that more of Representative Kaptur's old district was included in the newly constituted district, and placed the NASA Glenn Research Center and the NASA Plumbrook Station in Rebuttal District 9. Cooper, ECF No. 249 at 37:5-6, 38:5-7, 39:7-20, 44:24-45:4; 56:20-57:17; Trial Ex. P624 (indicating core retention of 61.7 percent for Rep. Kaptur, compared to 25% for Rep. Kucinich); *see* DiRossi, ECF No. 243 at 158:23-159:6; 162:7-18, 166:14-19; 183:4-13; 193:12-19.

985. Based on Mr. DiRossi's testimony as to what was required, in the Rebuttal Plan, Mr. Cooper ensured that a 2011 incumbent was not placed in a Franklin County-based District 3 with a comparable BVAP, that current Representative Joyce Beatty's home was kept in that District, that former Representative Mary Jo Kilroy's home was kept out of that District, and that The Ohio State University campus was placed into that District. Cooper, ECF No. 249 at 37:22-38:3; 38:14-25; 42:10-14; 53:16-55:8; *see* DiRossi, ECF No. 243 at 155:12-17, 177:17-22; 177:23-178:6; 178:23-179:12; 180:3-9.

986. As Mr. DiRossi testified that the incumbent pairings under the 2012 Plan were required, Mr. Cooper paired the same sets of incumbents in the Rebuttal Plan. Cooper ECF No. 249 at 38:5-11; 39:21-23; Trial Ex. P263-P264 (indicating core retention statistics for Rebuttal Plan); *see* DiRossi, ECF No. 243 at 157:5-9; 158:23-159:6; 168:7-17; 173:7-10; 176:22-177:9, 282:4-283:21.

987. Based on Mr. DiRossi's testimony as to what was required in drawing the 2012 Plan, in the Rebuttal Plan, Mr. Cooper kept Mercer County split as it is under the current plan, kept Montgomery County whole, kept Clark County whole, and kept Loveland within District 2. Cooper ECF No. 249 at 37:11-13, 38:12-13, 39:1-6; 53:6-15; 56:11-18; *see* DiRossi, ECF No. 243 at 167:12-17, 168:18-22; 184:4-13 188:3-5; 192:24-193:2; 237:13-22; 245:21-246:23.

988. Based on Mr. DiRossi's testimony, Mr. Cooper brought District 11 into Summit County and ensured it had a BVAP over 50%. Cooper ECF No. 249 at 37:8-10; 42:15-19, Trial Ex. P618 (population statistics for Rebuttal Plan); *see* DiRossi, ECF No. 243 at 186:15-22, 171:1-12, 282:23-283:21.

989. Contrary to Mr. DiRossi's testimony, bringing District 11 into Summit County does not compel the level of splits and irregular district shapes in Northeast Ohio and elsewhere as is found in the 2012 Plan. *Compare* Trial Ex. 617 (map of rebuttal plan), *with* Trial Ex. P474, Cooper App'x at 24 (map of 2012 Plan at Ex. D-2); Cooper, ECF No. 249 at 58:23-59:6; *see* DiRossi, ECF No. 243 at 176:9-14.

990. Based on Mr. DiRossi's testimony, Mr. Cooper ensured that the headquarters for Timken Corporation were included in District 16, where Representatives Sutton and Renacci were paired. Cooper, ECF No. 249 at 37:19-21; 38:10-11; *see* DiRossi, ECF No. 243 at 182:20-183:1.

991. Mr. DiRossi testified that in drawing the 2012 Plan, Franklin County needed to be represented by both Democratic and Republican congressional representatives, DiRossi, ECF No. 243 at 288:15-22, and in Mr. Cooper's Rebuttal Plan, Franklin County has both a Democratic and a Republican congressional representative. Trial Ex. P625, Exhibit presenting rebuttal plan elections results percentage of Democratic vote (a Democrat prevails in District 3 and a Republican in District 15 in Franklin County). Contrary to Mr. DiRossi's testimony, three districts are not needed in Franklin County in order that the county be represented by a Democrat and a Republican. Mr. Cooper did not split Franklin County into three districts as it was not required to achieve this purported goal, but testified it could easily be done without substantially altering the Rebuttal Plan. Cooper, ECF No. 249 at 100:13-101:17.

992. Complying with these purported requirements, Mr. Cooper was able to draw a Rebuttal Plan that was still better than the challenged plan on traditional redistricting criteria and allowing Democratic voters to have a better opportunity to elect their candidates of choice. Cooper, ECF No. 249 at 42:22-44:9; 48:20-24; 49:11-17; Trial Exs. P618-P622 (exhibits presenting population features, splits, and compactness scores of the Rebuttal Plan); Trial Ex. P625 (exhibit presenting elections results percentage of Democratic vote); Trial Ex. P454, Cooper App'x at 26, 66-69, 73 (regarding features of the 2012 Plan); Trial Ex. P598, Cooper Third Suppl. Decl. at 3-4.

993. Under the Rebuttal Plan, the number of Democratic majority districts changes across election cycles. Cooper, ECF No. 249 at 47:20-48:8. In 2012, there were 5 districts with a Democratic majority, plus four additional competitive districts. Trial Ex. P625 (exhibit presenting percentage of the Democratic vote for rebuttal and 2012 plans); Cooper ECF No. 249 at 45:17-46:2. In 2014, there were 3 districts with a Democratic majority, plus two additional

competitive districts, one of which would likely have a Democratic majority if the uncontested election was imputed. *Id.*; Cooper, ECF No., 249 at 46:3-47:19; 105:3-106:5; 108:14-109:9. In 2016, there were 4 districts with a Democratic majority, plus two additional competitive districts. Trial Ex. P625 (exhibit presenting percentage of the Democratic vote for rebuttal and 2012 plans). In 2018, there were 6 districts with a Democratic majority, with 1 additional competitive district. *Id.*

994. Mr. Cooper would not have drawn the Rebuttal Plan as a proposal for what should be implemented, but rather to demonstrate that the features identified by Mr. DiRossi do not compel the structure of the 2012 Plan. Cooper, ECF No. 249 at 35:16-18; 36:9-11. He would not have drawn this Plan because, while better than the 2012 Plan, it remains problematic in terms of traditional redistricting criteria. *Id.* at 35:19-36:8 (“District 9, running from Toledo to Cleveland, is problematic. District 11, as drawn going into Summit County, is problematic. It’s not necessary to create a minority opportunity district in northeast Ohio by taking part of Cleveland and Cuyahoga County district into Summit County, in my opinion. And, importantly, there’s no reason to split Hamilton County three ways and the city of Cincinnati three ways in order to combine part of the city of Cincinnati with Warren County.”); *id.* at 41:1-4 (“There’s no reason to draw a District 1 that would go outside the jurisdictional boundaries of Hamilton County, because it’s over the population size of a congressional district.”).

F. Defendants’ expert Dr. M.V. Hood

995. The evidence offered by Defendants’ expert, Dr. M.V. Hood does not undermine, and instead supports, findings of partisan intent and partisan effect at the statewide and district level, and causation. Hood, ECF No. 247 at 183:9-17, 184:3-9, 185:5-10, 191:4-19, 194:10-195:20, 199:15-201:4, 201:10-203:9, 204:22-205:10, 212:6-11, 216:24-217:3, 217:7-23, 217:24-220:1, 223:14-225:12, 225:13-227:10; Hood ECF No. 249 at 9:10-11:8.

996. Dr. Hood testified that Republicans were in complete control of the legislative process in 2011 and that he knows of no example other than one in Georgia where the party in control elevated another constraint over defeating the opposing party. Hood, ECF No. 247 at 183:9-17; 184:3-9; 185:5-10.

997. Dr. Hood testified that the 2012 Plan did not make any improvements over the 2002 Plan. *Id.* at 191:4-19.

998. Dr. Hood testified that Rep. Renacci was favored over Rep. Sutton under the challenged congressional map. *Id.* at 194:10-195:20.

999. Dr. Hood testified that he did not assess whether Democrats were differentially clustered than Republicans and could not say whether political geography causes Democrats to win only four of 16 districts. *Id.* at 199:15-201:4.

1000. Dr. Hood agrees that the phrase “natural packing” implies a cluster of partisans wind up in the same congressional district, but the lines between Congressional Districts 1 and 2 cut through a cluster of Democratic VTDs in Hamilton County due to the legislature drawing the districts that way. *Id.* at 201:10-203:9.

1001. Dr. Hood agrees that the legislature had available the election results data from 2002 through 2010. *Id.* at 204:22-205:10. Dr. Hood agrees that the reliance on certain elections can impact the level of partisanship that an index shows. *Id.* at 209:10-16.

1002. Dr. Hood agrees that his partisan index did not include five of the “statewide, contested elections for the decade preceding the 2010 redistricting-cycle.” Trial Ex. D4, Hood Report at 11; Hood, ECF No. 247 at 212:6-11. Because of this exclusion, Dr. Hood’s index states a lower Republican percentage than does a complete index that includes the “statewide, contested elections for the decade preceding the 2010 redistricting-cycle,” including 2002. Trial

Ex. D4, Hood Report at 11; Hood, ECF No. 247 at 216:24-217:3. Dr. Hood agrees that, on average, his index understates the known Republican composition of the congressional districts in the challenged plan by 2.6 percent. Hood, ECF No. 247 at 217:7-23; Trial Exs. D4 at 15; P045-P061 (illustrated in Demonstrative Trial Exs. PD90 and PD97). Dr. Hood further agrees that using the complete index known at the time more closely reflects the congressional vote from the 2010 election, data also known to the legislature at the time. Hood, ECF No. 247 at 217:24-220:1; Trial Exs. D4 at 15; P045-P061 (illustrated in Demonstrative Trial Exs. PD90, PD94). Dr. Hood agrees that using the complete index known at the time also more closely reflects the actual congressional vote under the challenged plan. Hood, ECF No. 247 at 220:2-221:18.

1003. Dr. Hood agrees that the Unified Index states a lower Republican percentage than does a complete index that includes the “statewide, contested elections for the decade preceding the 2010 redistricting-cycle,” including 2002. Trial Ex. D4, Hood Report at 11; Hood, ECF No. 247 at 223:14-225:12. Dr. Hood agrees that, on average, the Unified Index understates the known Republican composition of the congressional districts in the challenged plan by 3.2 percent. Hood, ECF No. 247 at 224:3-18; Trial Ex. D4, Hood Report at 15; Trial Exs. P045-P061, P261, Ohio House Republican Caucus: GOP Index Used for H.B. 319 and Revised Congressional Map at MCGREGOR00000007 (illustrated in Demonstrative Trial Exs. PD90 and PD99).

1004. Dr. Hood agrees that by leaving out the 2002 races from the “statewide, contested elections for the decade preceding the 2010 redistricting-cycle,” the Republican shift in Ohio is overstated. Hood, ECF No. 247 at 225:13-227:10.

1005. Dr. Hood agrees that the congressional district lines themselves can impact the ability of a challenger to raise comparable funds and can prevent the recruitment of experienced candidates. Hood, ECF No. 249 at 9:10-11:8.

V. There Is No Legitimate Justification Or Neutral Explanation for Republicans' Partisan Gerrymander.

A. VRA compliance does not justify the Republicans' 12-4 map.

1006. As set forth below, a desire to avoid diluting the votes of minority voters did not justify the packing of Democratic voters into the 11th and 3rd Districts.

1. *To ensure a 12-4 map, Republicans packed Democrats living in Cleveland and Akron into the 11th District.*

1007. The district now identified as Ohio's 11th District was created in 1969. Fudge, ECF No. 239 at 79:20-24.

1008. Between 1969 and 2011, the 11th District primarily comprised the city of Cleveland and certain surrounding Cleveland suburbs. Fudge, ECF No. 239 at 80:6-81:15. During this period, the district was located entirely within Cuyahoga County. *Id.*

1009. Following the 2011 redistricting, and as currently composed, the 11th District includes portions of the cities of Cleveland and Akron, along with a narrow strip following Interstate 77 between the two cities. *Id.* at 82:16-25.

1010. As a result, the 11th District extends beyond Cuyahoga County and includes, for the first time since its creation, portions of neighboring Summit County. *Id.* at 82:16-83:3.

1011. Representative Marcia Fudge has represented the 11th District since 2008. Joint Stipulated Facts ¶ 24, ECF No. 212-1; Fudge, ECF No. 239 at 80:6-8. Prior to serving in Congress, Representative Fudge served as Chief of Staff to her predecessor, Representative Stephanie Tubbs Jones, who also represented the 11th District. *Id.* at 80:22-81:1.

1012. In 2011, the map drawers set the 11th District's boundaries to include 51.31% Single-Race Black voting age population ("BVAP"). *See* Trial Ex. P057 at 4 (Maptitude screenshot displaying "% BLKVAP" of the 11th District); Blessing Dep., ECF No. 230-5 at 97:18-24 (confirming that the Maptitude file reflected in P057 is the map of H.B. 369 as enacted); Brunell, ECF No. 247 at 35:15-19 (testifying that certain Census data indicates that the 11th District has "approximately 51.3 percent" BVAP); Cooper, ECF No. 249 at 133:6-8 (testifying that the Census data that Dr. Brunell relied upon in calculating the 51.3% BVAP value uses the single-race metric).

1013. Under H.B. 369, the 11th District is 52.37% Any-Part BVAP. Trial Ex. P454, Cooper App'x at 26; Cooper, ECF No. 249 at 66:10-15.

1014. Racial bloc voting analysis, also known as racially polarized voting analysis, is the method to determine what BVAP is necessary to provide Black voters the opportunity to elect a legislator of choice. *See generally* Trial Ex. P254, Handley Report. When conducting this analysis, it is appropriate to use Any-Part BVAP when conducting an analysis of a district's compliance with the Voting Rights Act. Cooper, ECF No. 249, at 99:10-15 ("[T]he appropriate category to use in Section 2 litigation is the any-part-black category, particularly in areas where there are very few Hispanics.").

1015. Ohio Republicans were aware that they needed to conduct a racial bloc voting analysis. In an email dated September 29, 2010, a year before the first draft map was introduced, Hofeller wrote to legislative legal counsel Lenzo that to address "Section 2 issues in your three major counties," indicating that they "might need databases of greater depth in those counties-including Democrat primary elections in which African-Americans faced white Democrats in the primary, or white Republicans in the generals." Trial Ex. P396, Email exchange between Tom

Hofeller and Michael Lenzo at REV_00023241. “These data are required for racial or ethnic block voting analyses.” *Id.* And even if the Ohio Republicans did not intend to use such analyses to inform the districts they drew, Hofeller still advised them to collect the data since “you still may need this data to protect yourselves against challenges.” *Id.* Yet no database of “greater depth” containing Democratic primaries in any part of the state was ever created or analyzed. *See* Trial Ex. P018 (database of prior election results broken down by block used by mapdrawers did not contain any primaries, only general election results and indices of general elections).

1016. In a September 8, 2011 email chain, RNC expert Hofeller wrote that non-Hispanic black voting age population (“NHBVAP”) in the then-draft 11th District was “just barely over 50%, but Adam [Kincaid] is trying to raise it back up.” Trial Ex. P394, Email exchange between Braden and Hofeller at 1-2, Kincaid Dep., ECF No. 230-28 at 322:3-17, 398:2-5 (confirming Hofeller sent the emails reflected in P394). In response to Hofeller, Braden made clear that “[t]he 11th really cannot get any thinner NHBVAP” and that “50.04 is lower than I want.” Trial Ex. P394, Email exchange between Braden and Hofeller at 1.

1017. According to Batchelder, then-Chair of the Summit County Republican Party Alex Arshinkoff did not view the incorporation of portions of Summit County into the 11th District “as a loss to him” because the voters included in the 11th District “were mostly black Democrats.” Batchelder Dep., ECF No. 230-3 at 95:2-19. Batchelder presumed that Arshinkoff approved of this approach “because it helped other districts in Summit County be more Republican.” *Id.* at 96:21-25; Batchelder, ECF No. 246 at 53:23-54:2.

1018. On September 21, 2011, Senator Faber, the sponsor of the redistricting bills in the Ohio Senate, spoke on the Senate floor:

While there was some testimony and some view to the contrary, some people also indicated that we could comply with the Voting Rights Act by drawing a minority preference district or, in fact, a district that had less than 50 percent voting age African Americans in it. We don't think that's correct. We don't think that's the conservative view, and what we did in this map and what this map does, is it fully complies with not just what is arguably a view on the Voting Rights Act, it fully complies with the intent of the Voting Rights Act by creating a minority-majority district in that region.

Trial Ex. J03, Ohio State Senate Session at 10:25-11:12.

1019. As Senator Faber articulated, it was hardly self-evident at the time that drawing the 11th District to include more than 52% BVAP was required by the Voting Rights Act.

1020. Indeed, in the vicinity of the current 11th District and the District under the immediately prior redistricting cycle, a 45% black voting age population ("BVAP") offers black voters a realistic opportunity to elect their candidates of choice to represent the 11th District. *See supra* Section IV.C (full discussion of Dr. Lisa Handley's findings); Trial Ex. P254, Handley Report at 17; Handley, ECF No. 240 at 149:5-10 ("I conclude that 45 percent black VAP would provide a comfortable margin for the black-preferred candidate" around Cuyahoga County.).

1021. It was not necessary to incorporate portions of Summit County into the 11th District to create a district that provides minority voters with the opportunity to elect their candidates of choice in order to comply with the Voting Rights Act, and in fact doing so was problematic in terms of VRA compliance. *See supra* Section IV.E (full discussion of Mr. William S. Cooper's findings); Cooper, ECF No. 241 at 155:8-18, 159:14-25; 206:13-20; Cooper, ECF No. 249 at 35:25-36:4.

2. *DiRossi's "Minority Opportunity" spreadsheet was driven by partisan data.*

1022. DiRossi created a spreadsheet with the filename "The State - Indexes.xls" that displays political scorings for the 3rd and 11th Districts. Trial Ex. P113, Spreadsheet "The State

Indexes,” DiRossi Dep., ECF No. 230-12 at 200:17-19 (affirming that he is the author of this document). The metadata to the spreadsheet indicates that DiRossi last modified it on November 15, 2011, after H.B. 319 was enacted.

1023. The spreadsheet charts includes the text “Draw new minority opportunity district Franklin County – CD 03.” Trial Ex. P113, Spreadsheet “The State Indexes.” But the data on the spreadsheet only concerns the partisan scoring of the proposed district. The spreadsheet indicates that the 3rd District scored a 37.83% Republican vote share under the Unified Index and a 31.39% Republican vote share under the Presidential Index. *Id.*, DiRossi Dep., ECF No. 230-12 at 202:17-20 (indicating that the percentages reflect Republican vote share).

1024. The spreadsheet also charts political scoring data across from the text “Comply with federal voting Rights act – CD 11.” Trial Ex. P113, Spreadsheet “The State Indexes.” The spreadsheet indicates that the 11th District scored 22.63% Republican vote share under the Unified Index and 17.21% Republican vote share under the Presidential Index. *Id.*

1025. The spreadsheet contains no data related to increasing opportunities for minority candidates to elect their candidates of choice. *Id.* The only data in the spreadsheet are political scores for the 3rd and 11th District, showing that both districts are strong Democratic strongholds. *Id.* The spreadsheet does not contain data underlying a racial bloc voting analysis. *Id.*

3. *To ensure a 12-4 map, Republicans packed Democrats living in Franklin County into the 3rd district.*

1026. A minority opportunity district could have been created in Franklin County under a different configuration of the map. Trial Ex. P090, Cooper Decl. ¶ 43; Trial Ex. P454, Cooper App’x at 47 (Ex. E-2), 51 (Ex. E-3 District 3); Trial Ex. P093, Cooper Second Suppl. Decl. ¶¶ 26, 46.

1027. Republicans created the new district in Franklin County to pack Democratic voters into a “sinkhole,” *see supra* Section II.F, not to create a minority opportunity district.

B. Republican map drawers invoked incumbency protection merely to preserve their eight-seat advantage.

1. *Incumbency protection was not a priority for the Republican map drawers.*

1028. Incumbency protection was not a genuine priority of the Republican map drawers responsible for the 2011 congressional map. Upon introducing H.B. 319 in the Ohio House of Representatives on September 15, 2011, Huffman explained that the “protection of incumbents” was “subservient” to the other redistricting principles that guided the Ohio Republican map drawers. Trial Ex. J01, Ohio House Session Tr. at 18:14-19:2. Huffman continued: “Nobody has a district. Every two years, there’s an election, and that’s how it works. That’s how the system works. There’s nobody that owns a piece of land in Congress. People elect them.” Regarding the incumbent pairings that resulted from H.B. 319, Huffman explained: “Now, that isn’t necessarily the way it was intended to be. It could’ve been different, but that’s the way it ended up.” *Id.* at 21:8-22:4.

1029. Huffman later testified that he had no objectives regarding the substance of the map, and that he does not know whether any of the traditional criteria were taken into account. Huffman Dep., ECF No. 230-19 at 59:20-25; 64:14-17.

1030. Following the 2010 Census, Ohio’s congressional delegation was reduced from 18 seats to 16 seats, resulting in an overall loss of two seats from the state’s delegation. Trial Ex. J01, Ohio House Session Tr. at 14:2-11. Despite the reduction of Ohio’s congressional delegation by only two seats, both H.B. 319 and H.B. 369 unnecessarily paired three sets of incumbent Members of Congress. Joint Uncontroverted Facts ¶¶ 26-29, ECF No. 212-1; Fudge, ECF No. 239 at 86:8-15; Turner, ECF No. 240 at 24:2-8; Niven, ECF No. 242 at 111:21-112:3

(testifying that H.B. 369 did not reflect a desire to protect incumbent because the map “unnecessarily stacked three pairs of members of Congress together rather than what could have been just two pairs of members of Congress”); Hood, ECF No. 247 at 192:5-9.

1031. Plaintiffs’ expert Dr. Wendy K. Tam Cho reviewed the legislative history of H.B. 319 and H.B. 369 and concluded that incumbency protection was not a motivating factor in the drafting of the enacted map. *See supra* ¶ 773. Specifically, Dr. Cho noted the statements of Huffman in the legislative history disclaiming the goal of incumbency protection, as well as the fact that the enacted map unnecessarily paired three sets of incumbents. *Id.*

1032. In particular, both H.B. 319 and H.B. 369 placed the following pairs of incumbents in the same congressional district: Representative Marcy Kaptur and Representative Dennis Kucinich, both Democratic incumbents, in District 9; Representative Mike Turner and Representative Steve Austria, both Republican incumbents, in District 10; and Representative Betty Sutton, a Democratic incumbent, and Representative Jim Renacci, a Republican incumbent, in District 16. Joint Uncontroverted Facts ¶¶ 26-29, ECF No. 212-1.

1033. District 16 was constructed to be more favorable to the Republican incumbent. Hood, ECF No. 247 at 194:10-195:20. In the newly drawn 16th District, Representative Renacci was favored over Representative Sutton, retaining twice as much of the core of his former district and thus maintaining an advantage in a subsequent election contest between the two. *Id.*

1034. Representative Kaptur was first elected to Congress in 1982 and was the longest-serving member of the Ohio delegation in 2011. Kaptur, ECF No. 249 at 68:20-69:01; Niven, ECF No. 242 at 112:3-8.

1035. By pairing Representative Kaptur with another Democrat, H.B. 369 “weakened and potentially imperiled the political status of the dean of the Ohio congressional delegation.”

Niven, ECF No. 242 at 112:3-8. Doing so “cuts against the very core of your premise that the map was drawn for the purposes of incumbency protection and seniority enhancement.” *Id.* at 113:5-7; *see also id.* at 111:21-112:8 (“So if the intention of the map was to protect incumbents, then the map failed at that goal.”).

2. *Partisan advantage drove the map’s treatment of incumbency.*

1036. In drafting proposed maps, the Republican map drawers used as a baseline the 13-5 Republican majority in the Ohio congressional delegation following the 2010 elections. DiRossi, ECF No. 243 at 156:03-25. This eight-seat advantage was a high-water mark for Republicans in the state’s congressional delegation during the 2001 redistricting cycle. *See supra* ¶ 55. As the state’s congressional delegation was reduced from 18 seats to 16 seats following the 2010 census, any plan that would pair one set of incumbents from each party would have the effect of retaining that high-water mark eight-seat advantage. DiRossi, ECF No. 243 at 156:03-25.

1037. In considering various pairings of incumbents, Republican map drawers relied on partisan data to assess the effect of different proposed pairings on the competitiveness of resulting districts. Trial Ex. P329, Spreadsheet “District Indices”; Slagle Dep., ECF No. 230-45 at 59:12-60:7 (testifying that Trial Ex. P329 is “[a]bsolutely” a true and accurate copy of a spreadsheet obtained through a public records request); Trial Ex. 077, Spreadsheet “Ohio Changes”; Trial Ex. 078, Spreadsheet “Ohio Changes,” Kincaid Dep. Vol. II, ECF No. 230-28 at 381:13-382:10, 382:12-13, 385:13-387:24 (testifying that spreadsheets compiling political data for the “four-way split idea” and the “new district in Franklin County” were prepared contemporaneously to assess the alternative proposals). In particular, the Republican map drawers prepared a spreadsheet compiling political data for each district in maps that would pair different combinations of incumbents. Trial Ex. P329, Spreadsheet “District Indices.” Included

among the proposed pairings are the “4-Way Split,” under which Republicans would have paired two sets of Democratic incumbents. *Id.*; *see supra* Section II.E.2. For each proposed pairing, the spreadsheet identifies the number of “Attempted GOP Seats,” as well as the number of districts for which the percentage of votes cast for John McCain in the 2008 presidential election exceeded 50%, 52%, and 54%. *Id.*

1038. In addition to the “four-way split” proposal and the Turner/Austria pairing ultimately adopted, Republican map drawers considered placing Representative Bill Johnson and Representative Bob Gibbs in the same congressional district prior to the introduction of H.B. 319. Trial Ex. P329, Spreadsheet “District Indices”; Whatman Dep., ECF No. 230-52 at 34:11-14, 57:22-58:7. National Republicans abandoned this proposed pairing upon determining that it would have “result[ed] in 3 districts with a base Republican vote under 50 percent[, while a] Turner/Austria map only has one district under 50.” Trial Ex. P407, Email from Judy to Mann at LWVOH_0052431; *see also* Trial Ex. P329, Spreadsheet, “District Indices” (indicating that the Gibbs/Johnson pairing would result in fewer districts in which John McCain won more than 50% of the vote in the 2008 Presidential election).

C. The Republican map drawers did not consider compactness and deprioritized preserving communities of interest in service of partisan aims.

1039. Compactness is one of the traditional redistricting criteria. Trial Ex. P090, Cooper Decl. ¶¶ 5-6. It can be measured in Maptitude. Cooper, ECF No. 241 at 147:20-148:2. Yet, DiRossi testified that the Republican map drawers employed no system “other than visual[ly]” eye-balling draft maps to assess the compactness of proposed districts. DiRossi Dep., ECF No. 230-12 at 210:11-212:5. Moreover, the Republican map drawers never calculated a compactness score for any proposed district. DiRossi, ECF No. 243 at 284:1-9.

1040. Keeping communities of interest intact is another traditional redistricting criteria. Niven, ECF No. 242 at 40:23-41:7. It is most commonly measured by the number of instances in which a proposed districting scheme splits counties and municipalities. Hood, ECF No. 247 at 190:9-21; Brunell, ECF No. 247 at 77:3-19; *see also* Cooper, ECF No. 241 at 148:22-149:4. DiRossi testified that they had more important goals than minimizing county and municipal splits. DiRossi Dep., ECF No. 230-12 at 212:18-215:10.

VI. Ohio's Electoral Results

1041. Ohio's congressional elections under the challenged map have had the following results:

District	2012 Winner Vote Share	2014 Winner Vote Share	2016 Winner Vote Share	2018 Winner Vote Share
1	57.73%	63.22%	59.19%	51.32%
2	58.63%	65.96%	65.00%	57.55%
3	68.29%	64.06%	68.57%	73.61%
4	58.35%	67.67%	67.99%	65.26%
5	57.27%	66.46%	70.90%	62.25%
6	53.25%	58.23%	70.68%	69.25%
7	56.40%	Uncontested	64.03%	58.74%
8	Uncontested ⁷	67.19%	68.76%	66.58%
9	73.04%	67.74%	68.69%	67.79%
10	59.54%	65.18%	64.09%	55.92%
11	Uncontested	79.45%	80.25%	82.24%
12	63.47%	68.11%	66.55%	51.42%
13	72.77%	68.49%	67.73%	60.99%
14	54.03%	63.49%	62.58%	55.25%
15	61.56%	66.02%	66.16%	58.33%
16	52.05%	63.74%	65.33%	56.73%

Trial Ex. J17 (2012 Official Election Results), Trial Ex. J18 (2014 Official Election Results), Trial Ex. J19 (2016 Official Election Results), Trial Ex. J21 (2018 Official Election Results).

1042. The following table contains the Republican candidate's vote share in selected statewide elections:

⁷ There was no Democratic challenger to John Boehner in 2012. There was a small third-party challenger.

	Senate	Governor	Attorney General	Auditor	Secretary of State	Treasurer
2002		57.76%	64.12%	64.32%	59.27%	53.32%
2004	63.85%					
2010	56.85%	49.04%		50.22%	53.66%	54.52%

Trial Ex. J12 (2002 Official Election Results); Trial Ex. J13 (2004 Official Election Results); Trial Ex. J16 (2010 Official Election Results).

VII. Any Delay is Not Unreasonable or Prejudicial.

1043. Defendants and Intervenors have failed to identify any specific document that has been lost to time that, had it been preserved, would have shown that the maps were more fairly drawn (or not drawn with partisan intent). Furthermore, while some of the alleged advisers to the map drawers have passed away, all of the principal map drawers and legislators are still available and many have been witnesses in this case. This list includes: DiRossi, Mann, Batchelder, Niehaus, Judy, Whatman, Kincaid, Speaker Boehner, Morgan, Huffman, and Faber.

1044. Discovery in this case has been extensive and voluminous. It is doubtful that any documents that did not survive from the period would have shown a legitimate purpose for the map given the weight of evidence that the Defendants’ purpose was improper.

1045. Litigation was anticipated by the relevant participants from the very outset of the redistricting process. As previously discussed, Ohio Republicans attended the presentation of John Morgan on redistricting entitled, “Drawing the Lines.” *See supra* Section II.B. The presentation advised map drawers to “[n]ever travel without counsel” since “[a]spects of your redistricting will likely end up in court.” Trial Ex. P346, Presentation, “Drawing the Lines” at 4; *see also* Morgan Dep., ECF No. 230-34 at 135:11-24, 137:13-138:9. The presentation admonished that map drawers “[b]e aware of the record that is building around your actions.” Trial Ex. P346, Presentation, “Drawing the Lines” at 4. Map drawers were further advised to

keep the redistricting process “secret” and “safe.” Ex. P346, Presentation, “Drawing the Lines” at 2; *see also* Morgan Dep., ECF No. 230-34 at 131:17-133:6.

1046. Morgan’s advice was well heeded by the relevant participants. Counsel, Mark Braden, was involved in all aspects of the redistricting process. *See supra* Sections II.B, II.D, II.F.3-4, and II.H.1. And the documents introduced at trial show that Republican party leaders and legislative and congressional staffers regularly used personal email accounts rather than their official state and federal email addresses when they communicated about redistricting strategy, partisan requests, and the concerns of Republican incumbents.

1047. These warnings and words of caution show how unlikely it is that Republican legislators and their advisers discarded most of their exculpatory evidence and preserved mostly incriminating documents.